The OIL WEEKLY

10¢ A COPY

Exclusively Devoted To The Production and Transportation of Oil and Gas

June 22, 1928 **Volume 50. No. 1**

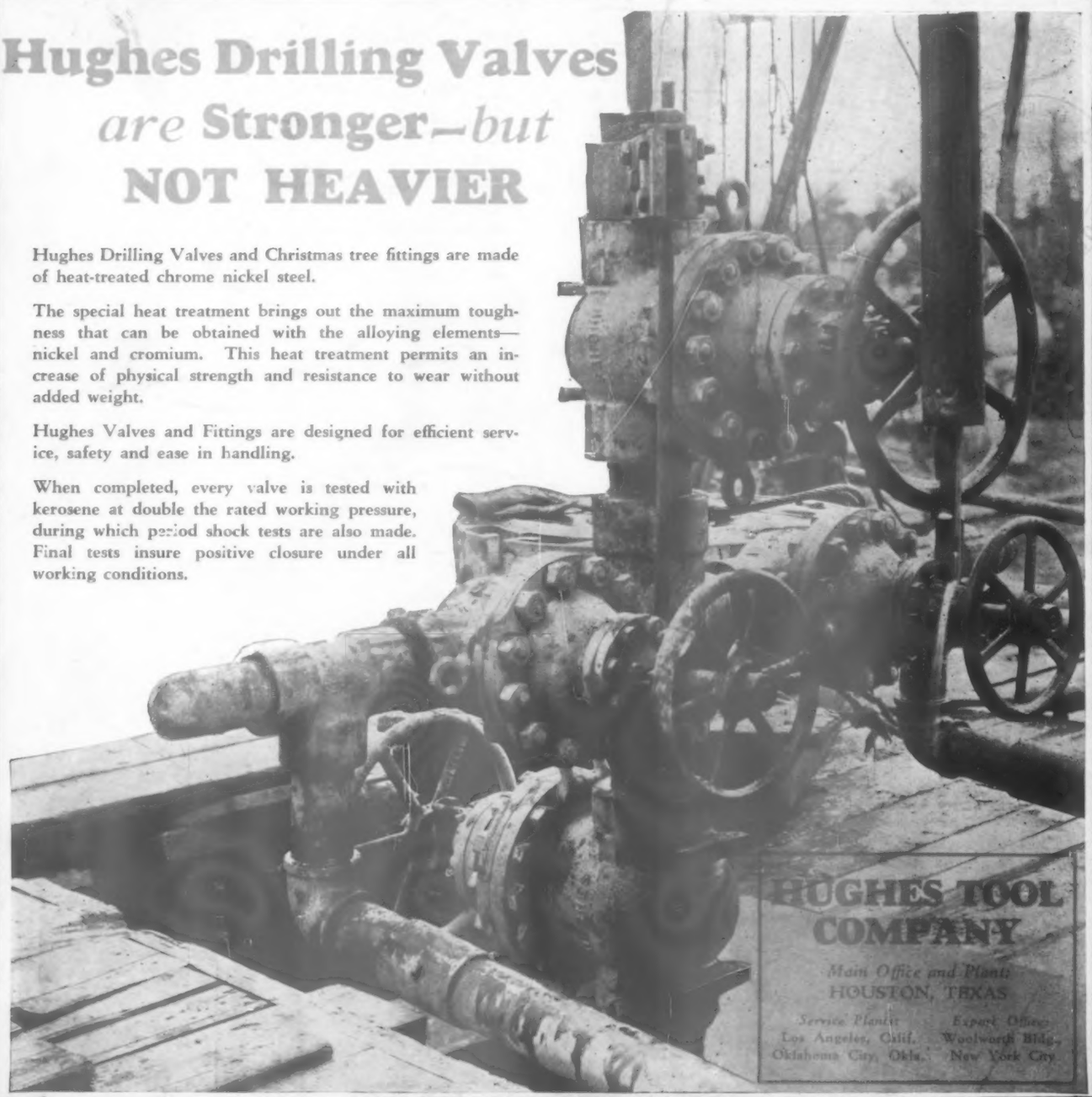
Hughes Drilling Valves *are* Stronger—*but* NOT HEAVIER

Hughes Drilling Valves and Christmas tree fittings are made of heat-treated chrome nickel steel.

The special heat treatment brings out the maximum toughness that can be obtained with the alloying elements—nickel and cromium. This heat treatment permits an increase of physical strength and resistance to wear without added weight.

Hughes Valves and Fittings are designed for efficient service, safety and ease in handling.

When completed, every valve is tested with kerosene at double the rated working pressure, during which period shock tests are also made. Final tests insure positive closure under all working conditions.



HUGHES TOOL COMPANY

Main Office and Plant
HOUSTON, TEXAS

Service Plants
Los Angeles, Calif.
Oklahoma City, Okla.

Export Office
Woolworth Bldg.,
New York City

TN860
.05

The dollars-and-cents value of coring has increased with every well drilled since Elliott first brought out a successful core drill. Why not, then, be sure that your coring equipment is designed to give you the most for your money—in speed, in ease of operation, in perfect cores recovered? The answer is obvious—the superiority of the Elliott core drill has never been successfully imitated. You'll find the new Elliott catalog interesting and valuable. Send for it.

ELLIOTT CORE DRILLING COMPANY

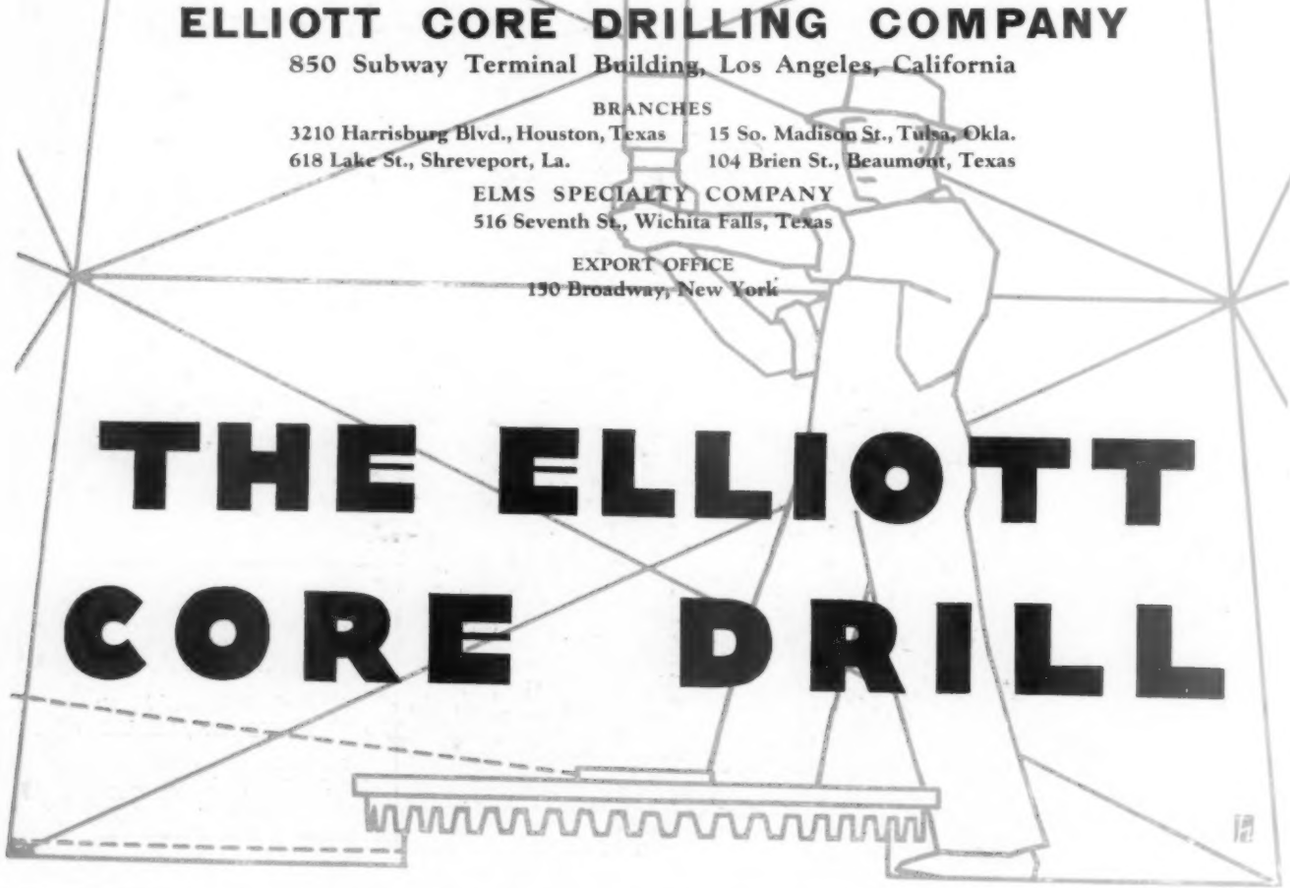
850 Subway Terminal Building, Los Angeles, California

BRANCHES

3210 Harrisburg Blvd., Houston, Texas
618 Lake St., Shreveport, La.
15 So. Madison St., Tulsa, Okla.
104 Brien St., Beaumont, Texas

ELMS SPECIALTY COMPANY
516 Seventh St., Wichita Falls, Texas

EXPORT OFFICE
150 Broadway, New York



THE ELLIOTT CORE DRILL

The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 3801 Buffalo Drive, Houston, Texas. Subscription price $1.00 per year; 10 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 5, 1879.

Franklin Was the First to Identify Electricity with Lightning!

GASO Is Among the Pioneers in Adapting Electricity to Pumping Equipment.

Although the trend toward electrification of pumping equipment continues to grow, the program of Midwest at Salt Creek is still one of the most outstanding of all electrification projects. In this job 140 Motor Driven Horizontal Duplex Piston Pumps were installed.

All were GASOS

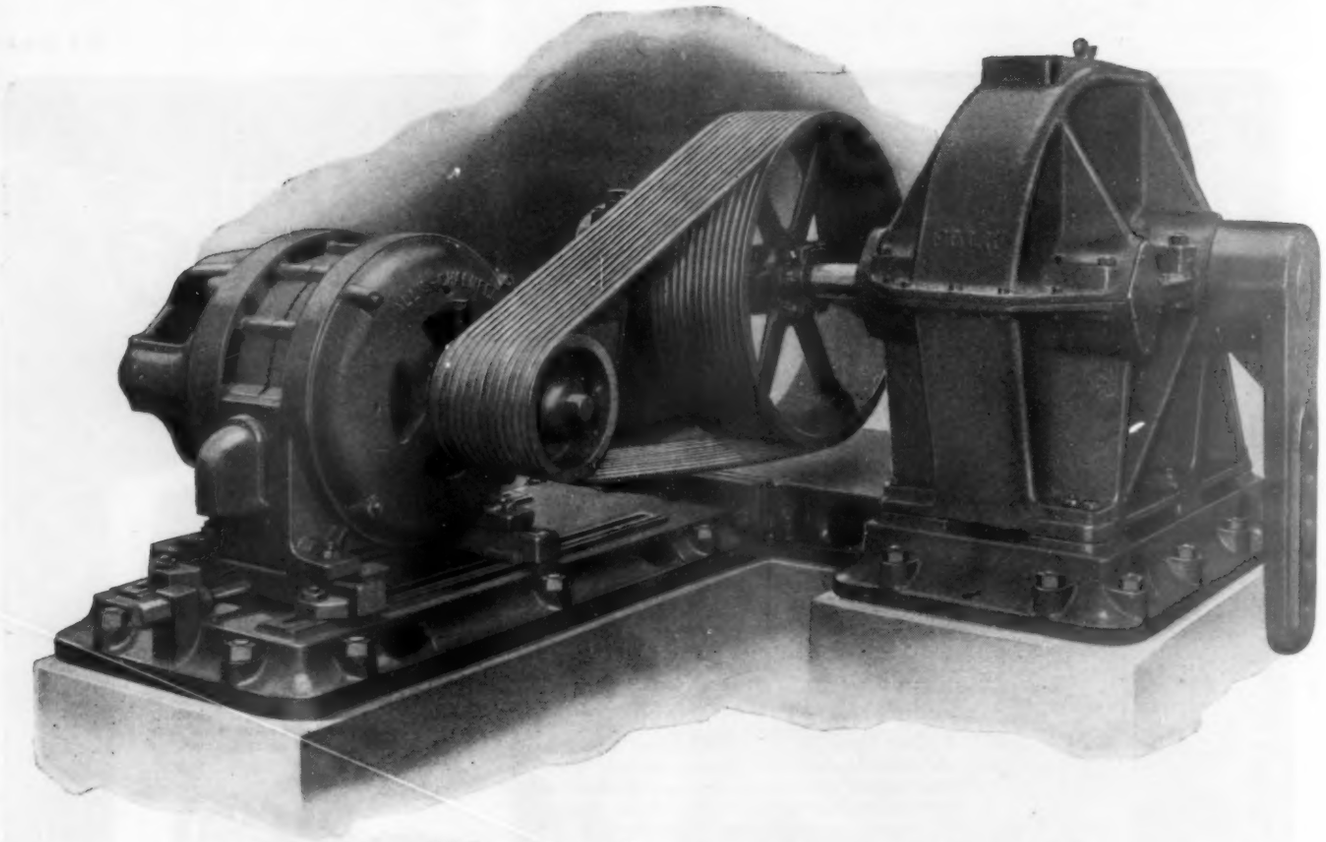
At the right are shown a few of the motor-driven types we have installed. As pioneers in this important field of electrification, we have acquired a fund of knowledge which we gladly place at your disposal.

GASO PUMP & BURNER MFG. CO.
Tulsa, Okla.

Figure 501-E—Gaso Duplex Piston Gear-Driven Power Pump, for general service in pressures of 200 to 800 pounds. Large unobstructed fluid passages and value areas. Simple in design; low in operating cost.

Figure 1018-E—One of the most popular of all Gaso pumps, fitted with electric power; a large capacity suction pump especially suited to station service and field work.

Figure 504-EC—An Electrically operated Horizontal Duplex Piston Gear-Driven Power Pump for pressures ranging from 450 to 800 lbs. Easy accessibility to valve pots.



More Power for Pumping

The Allis-Chalmers Texrope Driven, double reduction oil well pumping unit, including the motor, has an overall efficiency of 82% as determined by a prony brake test made by one of the large producers.

The Allis-Chalmers steel frame oil well motor is designed to give maximum efficiency. Timken bearings reduce the friction losses to a minimum.

The Texrope Drive, which acts as the first reduction of the pumping unit, in addition to being highly efficient, acts as a shock absorbing medium and protects the motor from repeated stresses that may be transmitted from the crank.

The Falk Herringbone reducer, acting as the final reduction of the unit transmits power and transforms speed with greater efficiency than any other similar type of mechanical device.

Oil Field Offices

DALLAS
HOUSTON
KANSAS CITY
NEW ORLEANS
DENVER
LOS ANGELES
SAN FRANCISCO

WESTERN SUPPLY COMPANY
TULSA, OKLAHOMA

ALLIS-CHALMERS MANUFACTURING CO.

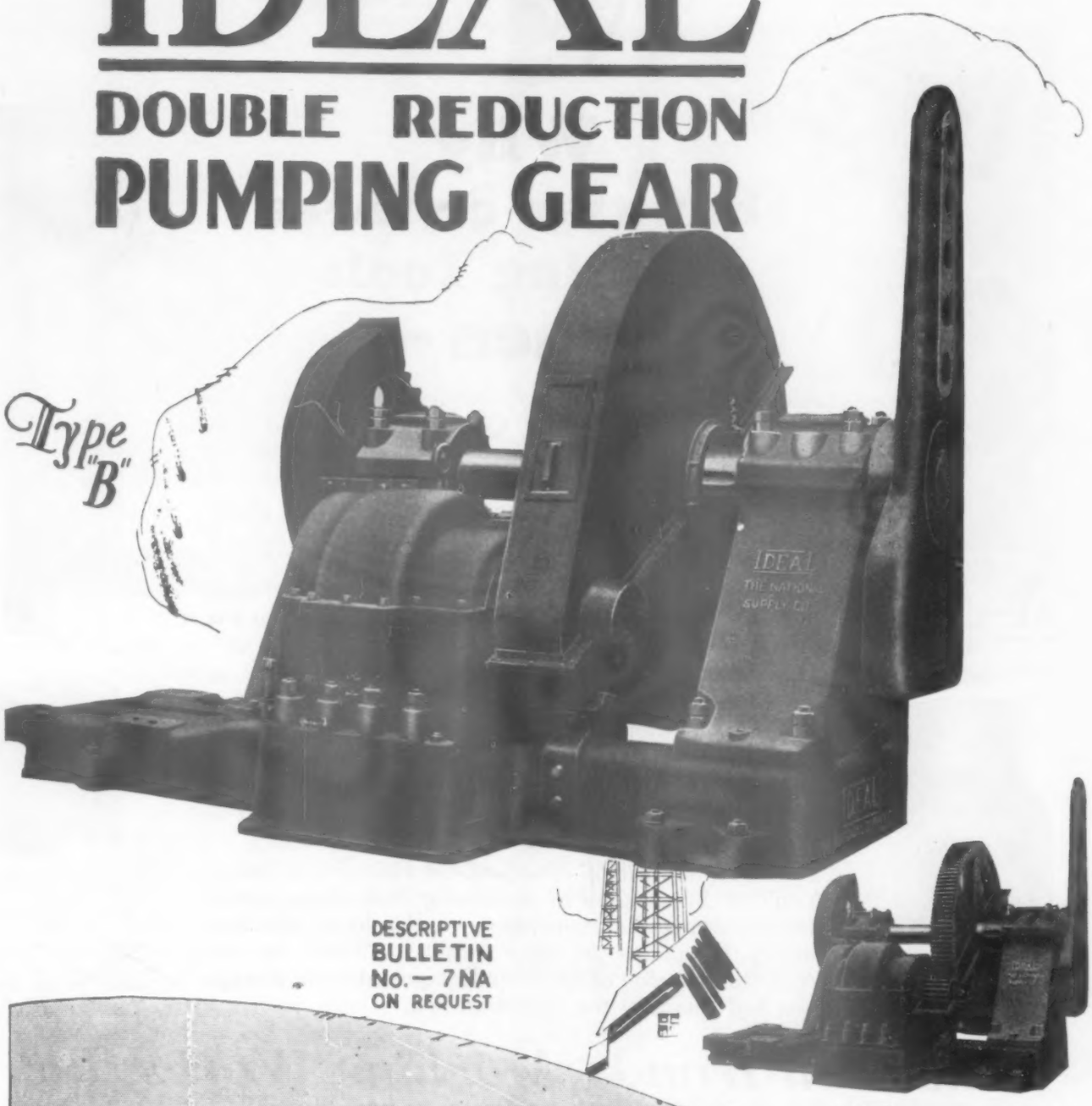
MILWAUKEE, WISCONSIN.

Say you saw it in The OIL WEEKLY

IDEAL

DOUBLE REDUCTION PUMPING GEAR

Type "B"



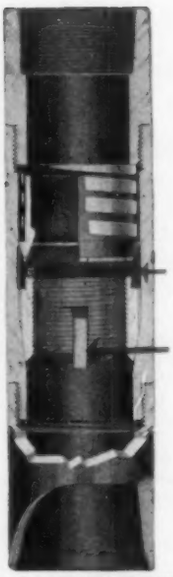
DESCRIPTIVE BULLETIN No.— 7NA ON REQUEST

THE NATIONAL SUPPLY COMPANIES

Say you saw it in The OIL WEEKLY

Fishing Tools Drilling Tools

AMERICAN IRON & MACHINE WORKS, INC. · OKLAHOMA CITY ·



OVERSHOT WITH STANDARD GUIDE

A—Rubber packer makes a tight joint between "fish" and overshot, assuring complete circulation of fluid thru the "fish."

B—Key rotates slip with Overshot.

OVERSIZE GUIDE FOR LARGE HOLES

Made for all sizes of holes. Attached quickly to overshot.

Why buy two or three Fishing Tools when —

All features are combined in the American? The American Releasing and Circulating Overshot will catch Drill Pipe, Coupling, or Tool Joint and will release from any point.

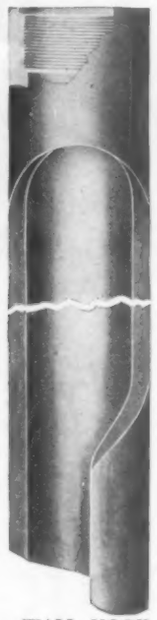
Notice the illustration. The slips, made with offset, work up and down together; it's impossible to make a fish without making the catch with both slips.

The slips are keyed in the bowl, and have left hand threads. A release is accomplished by rotating to the right.

The American Overshot will take the place of two or three fishing tools—saving you time and trouble. You can use the wall hook—or milling shoe—in place of your standard guide—and save many a run in and out of the hole.

The American Releasing and Circulating Overshot is FORGED STEEL THROUGHOUT.

Look over the list of American Oil Field Tools below. You'll find these tools in use among leading contractors and oil companies everywhere—and sold by the best supply companies in your locality. Write for the American Catalog of Oil Field Equipment—for description and details of the American line.



WALL HOOK
Forged Steel. No Welds.

MILLING SHOE
Type E
Teeth on Bottom and Inside.

Made with heat treated cutting teeth on inside and bottom for use in milling off and shaping up "fish" so that it will enter bowl of Overshot.

American Iron & Machine Works, Inc.

MANUFACTURERS OF OIL FIELD EQUIPMENT
OKLAHOMA CITY, OKLAHOMA

AMERICAN OIL FIELD EQUIPMENT

American Releasing and Circulating Overshots
American Rock Bit Wrenches
American Milling Shoes
American Flexible Couplings for Rock Bit Lubricators
American Steel Tool Houses
American Forged Steel Wall Hooks
American Rock Bit Breakout Blocks
American Rock Bit Cone Fishing Sockets
American Parrafin Bits
American Female Die Nipples
American Tapered Taps
American Forged Steel Subs
American Rotary Shoes
American Cone Fishing Baskets
American Steam Lubricators
American Combination Reverse and Throttle Levers
American Side-Tracking Mills
American Rock Bit Wash Pipe Attachments
American Rotary Milling Tools
American Myracle Sucker Rod Sockets
American Surface Bit Attachments for Rock Bits
American Drill Pipe Float Joints
American Pump Manifold Check Valves
American Casing Suspension and Blowout Preventer
American Lead Plug

CLARK "SUPER 2" COMPRESSORS

The CLARK "SUPER 2" Compressor—which is our regular 2-cycle compressor, wonderfully improved offers the unusual combination of minimum fuel cost with minimum operating cost.

Because of the CLARK Fuel Injector, which adds the gas under pressure after the cylinder has been filled with air, 10% to 15% more power for the size of the cylinder is developed. This supercharging effect, together with better mixing, higher turbulence, thorough scavenging of cylinders, and no loss of gas into the exhaust, enables the "Super 2" to operate on 1/3 less gas than the ordinary 2-cycle, and on the same amount of fuel as a 4-cycle compressor.

Yet the "Super 2" has all the advantages of 2-cycle simplicity and ruggedness, which means little attention required and a minimum operating force. Thus its operating cost is no greater than the best 2-cycle, and is less than a 4-cycle compressor.

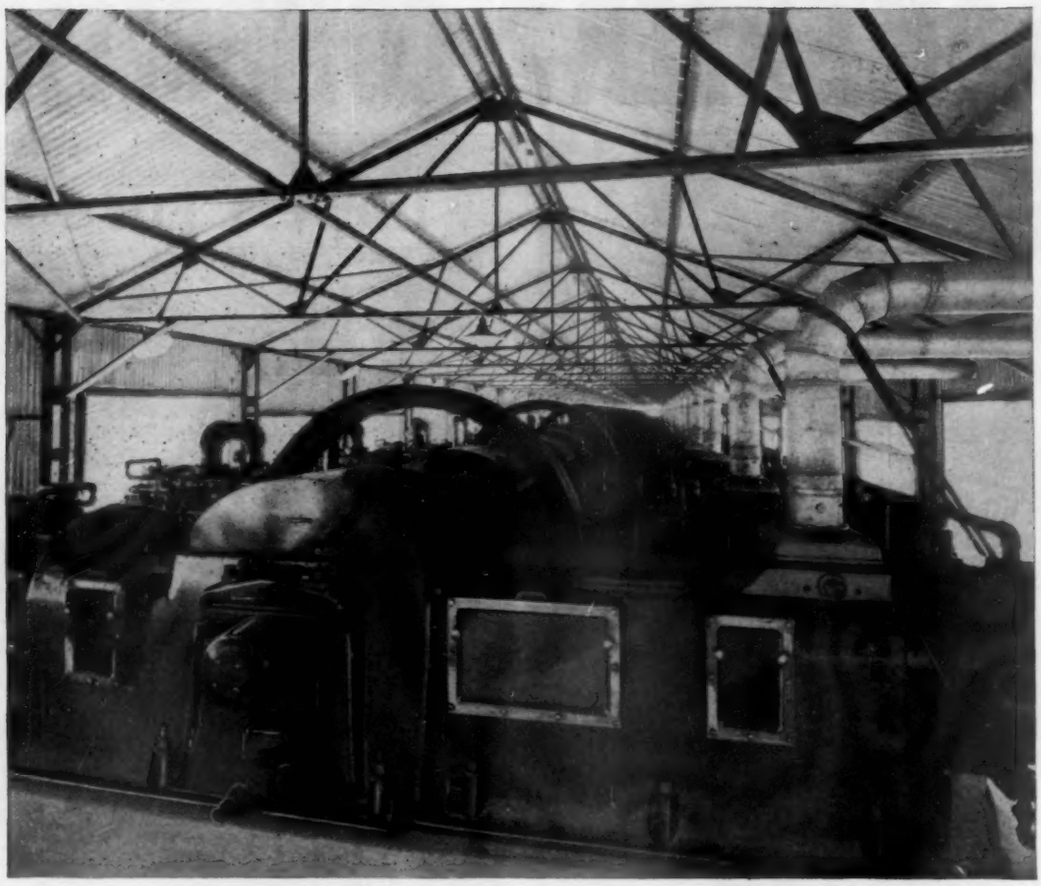
The above illustration shows two 90-H.P. Super 2-cycle single compressors, and four standard Clark 2-cycle compressors at the Roxana Gasoline Plant No. 16, in the townsite of Oxford, Kansas. Also available in 180 H.P. Twin model.

Call on our engineers for interesting operating data on the "Super 2." Clark Bros. Company, Olean, N. Y. Branch and Warehouse: 125 W. First St., Tulsa. Warehouses at McCamey and Sweetwater, Texas, and Artesia, N. M. Smith Booth Usher Company, 228 S. Central Ave., Los Angeles, 50 Fremont St., San Francisco.

Clark Bros. Co. OLEAN, N.Y.

CLARK

Say you saw it in The OIL WEEKLY



The Reed Air-Lift plant of the Pure Oil Co., powered with 24—175 H. P. Bessemer Type Ten Compressors, is probably the world's largest Air-Lift plant. Bessemers have consistently demonstrated their remarkable performability for the Pure Oil Co., as they have for most of the other leaders of the industry.

A Criterion of Value

THE only accurate measure of Bessemer Compressor value is Bessemer performance. The fact that Bessemers are continuously re-ordered by so many of the oil industry's largest compressor users is the most convincing evidence we can offer of their in-built dollar value.

Shrewd buyers don't throw good money after bad—but they *do* standardize on Bessemers.

THE BESSEMER GAS ENGINE COMPANY
62 York Street ∴ ∴ ∴ Grove City, Pa.

BESSEMER

Say you saw it in The OIL WEEKLY

A Proven Quick-Hardening Cement for Safe, Speedy Construction

QUIKARD CEMENT

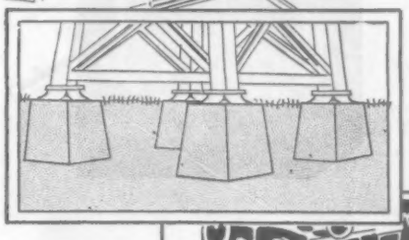
Use this reliable quick-hardening cement to speed up your oil-field construction work. Quikard is a specially-compounded and processed cement highly-refined and super-strong. It not only fulfills U. S. Govt. and A. S. T. M. standard specifications, but greatly exceeds all strength requirements, for Portand Cement. Above all, it develops—

28-Day Strength in 24 Hours

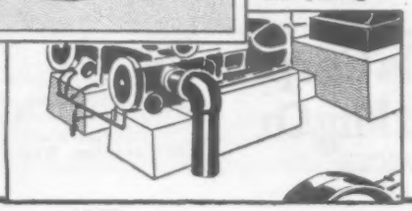
This means that properly-made Quikard concrete can be used with safety from 20 to 36 hours after placing—saving you from three to four weeks on all concrete work without sacrificing strength or permanence. And in addition to attaining 28 day strength in 24 hours, it develops increased strength thereafter!

Derricks set in concrete piers made with Quikard can be put in operation within 48 hours at the most. Floors, bases for machinery, powers, pumping equipment, booster stations, etc., made with Quikard can be used within the same length of time.

Quikard is *not* quick-setting. It takes its initial and final set normally allowing plenty of time for proper mixing, placing and finishing. It is worked just like Portland Cement, is unusually plastic and finishes quickly and easily. It produces an exceptionally waterproof concrete and is constantly uniform at all times. It forms a perfect bond with old or new Portland Cement concrete.



Derrick piers of QUIKARD will withstand heavy strain and stress within 24 hours after placing



Bases made of QUIKARD Cement are ready for duty many hours sooner.

Write, Wire or Phone

If your dealer does not stock Quikard Cement, write, wire or phone us. Packed in durable paper bags, it may be shipped in mixed cars with Ash Grove Portland Cement or Oilmax Cement. Quikard Cement is the exclusive development of one of the oldest, most substantial and successful manufacturers in the cement industry!

Produced Only by
ASH GROVE LIME & PORTLAND CEMENT CO.
Founded 1882
General Offices: KANSAS CITY, MO.
District Sales Offices: OKLAHOMA CITY, OKLA.
Petroleum Building, Phone Maple 0642 8

SAFETY
IT'S A WILSON

SPEED
IT'S A WILSON

STRENGTH
IT'S A WILSON

CONVENIENCE
IT'S A WILSON

The Wilson *patented* elements in Wilson Elevators are the basis for the 4 cardinal features demanded by progressive Operators — 1st, *Safety*, 2nd, *Speed*, 3rd, *Strength*, and 4th, *Convenience*.

One of the strongest factors contributing to *safety* is the *Wilson Tee-Head Spring Latch* —so designed that it will not unlatch accidentally, because the latch device never contacts with the casing.

The rigidity of the Body and great *strength* of the Hinge and Latch is a guarantee against pinched pipe and damaged joints, regardless of how great the load.

Wilson Elevators *are perfectly balanced* which enables latching around the casing with great *speed*. The Detachable Wilson Links can be removed or installed within a few minutes.

Wilson Elevators are *Convenient* — little effort on the part of the Operator is required to handle Wilson Elevators. The Tee-Head Latch and the Handle are placed in an easily accessible position.

You must use Wilson Elevators to get *Safety, Speed, Strength* and *Convenience*.

Carried in stock by your Supply Companies

No Wilson Elevator has ever dropped its load!

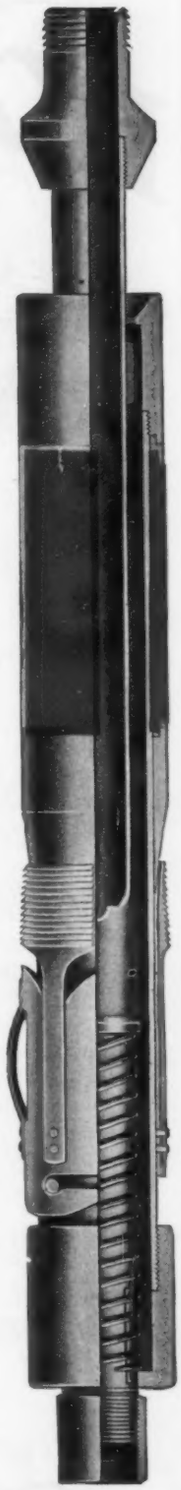
Factory Representatives
Tulsa, Okla.
409 Atlas Life Bldg.
Houston, Texas
219 Post Dispatch Bldg.

Wilson Oil Tools Corp.
DISTRIBUTORS FOR
Wilson & Willard Mfg. Co.
Factory and Distributor's Office — It's a Wilson — 2301 East Vernon Ave.
Los Angeles, Calif.

Factory Representatives
Big Spring, Texas
15 New Lester Fisher Bldg.
Fort Worth, Texas
814 Dan Waggoner Bldg.

Say you saw it in The OIL WEEKLY

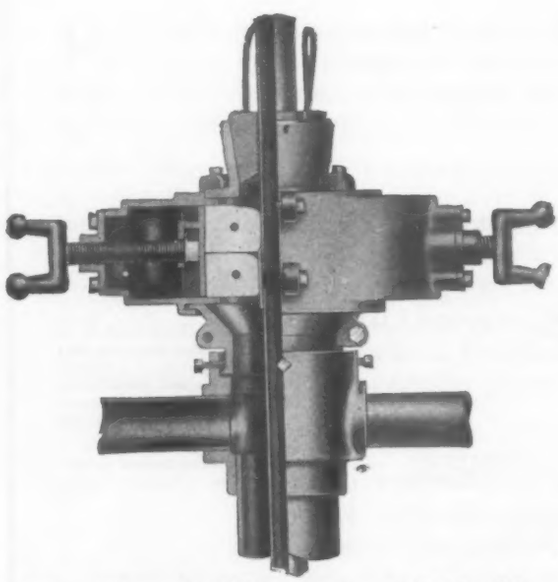
The Guiberson CONTROL HEAD PACKER *Makes the Gas in the Well Do Its Work*



Gas pressure is the energy of the well. Its work is to force oil from the sand. The GUIBERSON Control Head Packer, used in flowing wells, conserves the gas pressure until a maximum yield of oil has been obtained. Also, by maintaining surface pressure in the well, the use of the packer preserves the gravity of the oil.

The GUIBERSON Packer runs in against heavy flows which would prevent the entry of ordinary packers. This is possible because an ample passage for oil and gas is provided between tubing and packer. Setting the packer closes this passage tightly.

The GUIBERSON is easily set, and may be re-set higher or lower as desired. The valve may be opened at will. The packer can be pulled out at any time. Fully patented.



To Pack Flowing Wells

The GUIBERSON Tubing Oil Saver, set on top of the casing, prevents escape of oil and gas while packer is being run. Permits passage of tubing collars and can be opened wide to admit packer or tubing catcher. Patented.

"Better Be Safe Than Sorry"

The Guiberson Corporation

Box 1106 Dallas, Texas

California Branch: 1506 Santa Fe Ave., Los Angeles

402 W. First St., TULSA — 321 Osage St., PONCA CITY — 506 Trust Bldg., NEWARK, O.

GUIBERSON

BETTER BE SAFE THAN SORRY

Increasingly important as a manufacturing and distributing center for oil field supplies

Since the day that Captain Lucas brought in his famous gusher in Spindle Top, the day that made oil history throughout the world, Houston has occupied an important position as a center for the manufacturer and distributor who desired to quickly and economically serve this growing industry.

Today the great fields of Pierce Junction, Blue Ridge, Damon Mound, Liberty, Humble, Goose Creek, Spindle Top and West Columbia are but a few hours, even minutes, distance from Houston. The vast development in West Texas and Oklahoma, as well as the steady production in Arkansas and Louisiana, can be reached most expediently over the seventeen railways that go out from Houston to these great markets.

Port Houston makes it possible for the manufacturer or distributor of oil industry equipment and supplies to keep in definite and close touch with the developments in Mexico and Venezuela as well as export trade in other countries.

A complete analysis as to what Houston has to offer as a manufacturing and distributing center will be furnished you immediately upon request.

Looking toward tomorrow, investigate today.

Industrial Department

CHAMBER OF COMMERCE

HOUSTON, TEXAS

The Modern Line Pipe

No Welded Seams—
Lengths Up to 45 Feet

PITTSBURGH SEAMLESS PIPE, in long lengths up to 45 feet, and free from welded seams, marks a distinct forward step in oil, gas and steam lines.

The longer lengths effect a marked economy in laying the line, and the freedom from welded seams reduces to a mininum losses from leaks and the possibility of pipe failures.

You can reduce your pipe line construction and maintenance costs materially by standardizing on "Pittsburgh Seamless." It is the modern material for all important piping.

Advantages of Pittsburgh Seamless Line Pipe

1. Longer lengths (up to 45 feet).
2. Various Carbon Content (.10 to .20; .30 to .40; .40 to .50).
3. Thorough, minute inspection.
4. Economy in line construction.
5. Leakage losses reduced to minimum.
6. Economy in maintenance of line.

The slight extra cost of Pittsburgh Seamless over welded pipe is the best investment you can make in safety, economy and durability. There are corresponding advantages also in Pittsburgh Seamless casing, drill pipe, oil well tubing and still tubes.

Pittsburgh Steel Products Co.
DIVISION OF
Pittsburgh Steel Co.

PITTSBURGH · NEW YORK · DETROIT · CHICAGO · HOUSTON · TULSA

Pacific Coast Distributors
Buck & Stoddard, Los Angeles, California

For Line Pipe, Casing, Drill Pipe, Oil Well Tubing, use

* *This Split Liner is an exclusive feature of the PERFECTION.*

Like peeling a banana ....

the core comes out *whole* when you use

The PERFECTION CORE BARREL

Cutter Heads exchanged by any distributor

OIL CITY IRON WORKS

SHREVEPORT, LOUISIANA

Exporters: Continental Well Supply Co., 74 Trinity Place, New York City

Distributors:

Wilson Supply Company
Houston, Texas
Hercules Supply Company
Dallas, Texas
Hercules Supply Company
Vernon, Texas
Hercules Supply Company
Pyote, Texas
Continental Supply Company
Duncan, Okla.
Continental Supply Company
Healdton, Okla.

Oklahoma Office:
2 East California Street,
Oklahoma City

Say you saw it in The OIL WEEKLY

KEROTEST

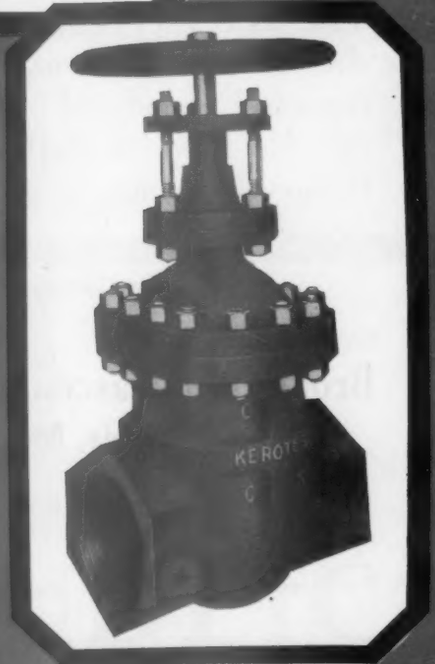
Only an Absolutely Perfect Valve Will Pass the Famous Kerosene Test

Nearly all valve manufacturers employ the very best workmanship and materials in their product. So do we.

But we go one step further. We have the Pittsburgh Testing Laboratory make an individual test of every valve before sending it to the oil fields.

The famous Kerosene Test is used, which subjects the valve to a maximum pressure test continuously for 24 hours. The valve gate is tested on each side under maximum test pressure. No more severe test was ever adopted.

It assures you that every Kerotest going into the oil fields has a *certified* record of strength to meet any emergency.



KEROTEST MANUFACTURING COMPANY
PITTSBURGH PENNA.

Carried in Stock and Sold by

Grinnell Company of the Pacific
Los Angeles San Francisco

Oil Well Supply Company
Branch Stores in all Oil Fields

Export Distributors:

Norvell-Wilder Hardware Co.
Houston Beaumont
Shreveport Fort Worth

Oil Well Supply Company
Pittsburgh New York
Tampico London

Manufacturers of Drilling Valves, Refinery Valves, Flow Line Valves and Heavy Duty Fittings for oil fields.

Yellow Strand
Rotary Drilling Lines

It's strength you need in a Rotary Line—strength combined with the ability to bend around the sheaves of the crown block without injury.

It is this valuable combination of qualities that causes Yellow Strand Rotary Lines to last longer and be so economical.

The wire for Yellow Strand is drawn to our special specifications in Europe and imported by us. No wonder Yellow Strand Rotary Lines are so good!

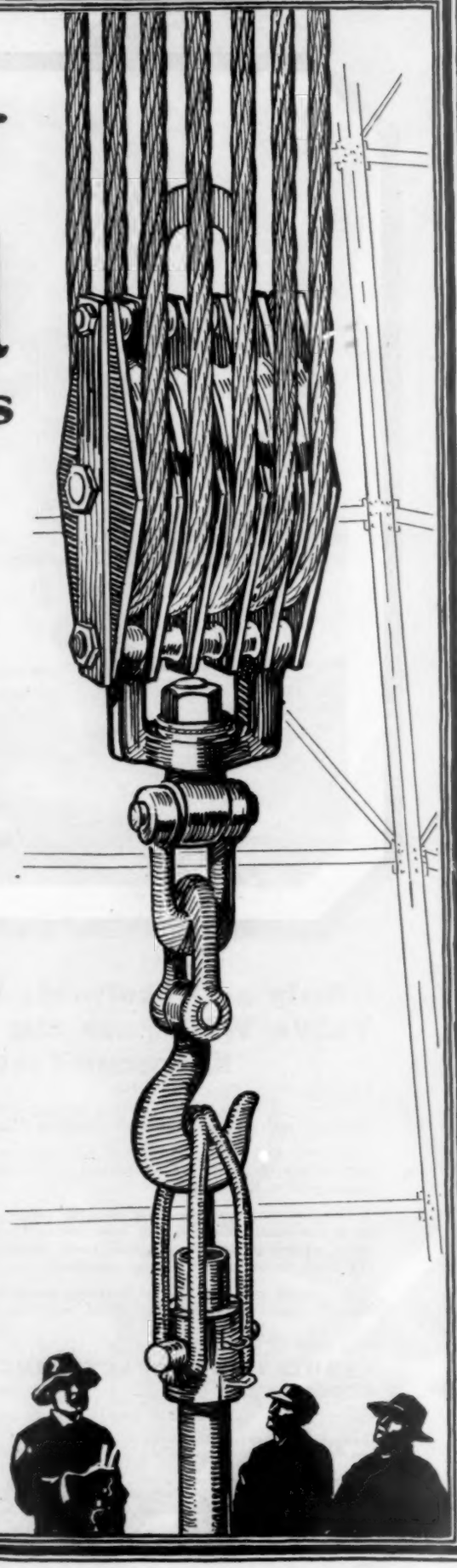
Ask for Catalog 41

Broderick & Bascom Rope Co.
St. Louis, Mo.

Branches: 68-70-72 Washington St., New York City and Seattle, Wash.

Factories: St. Louis, Mo., and Seattle, Wash.

LR551



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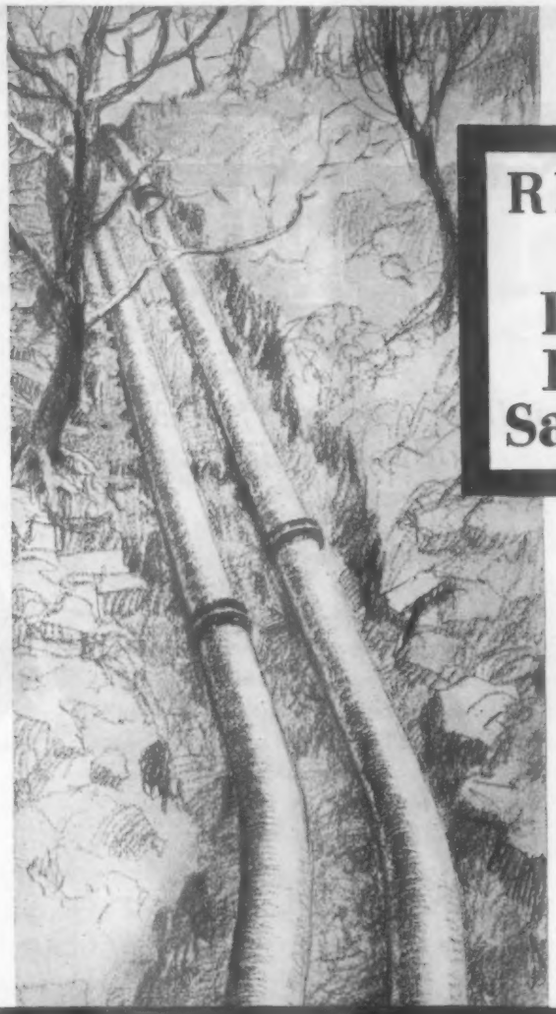


REPUBLIC *Means* Every Day Pipe Line Satisfaction

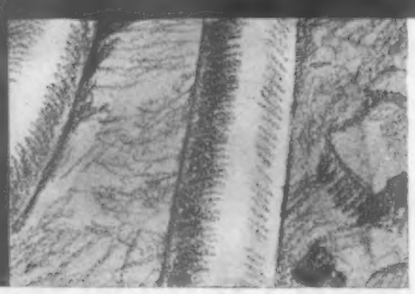
Every day pipe line satisfaction . . . that's why Oil Country men have confidence in Republic.

When Laying a New Line—every length of Republic pipe is of uniform quality—strong and sound, with good clean threads that assure tight joints.

After the Line Is Laid—Republic Pipe provides constant, satisfactory and enduring service.

If it's "Republic," there are no pipe line troubles.

PRODUCTS
Tubing
Casing
Line, Rotary and Drill Pipe.



Branch Offices

Birmingham	Denver
Boston	Detroit
Buffalo	El Paso
Chicago	New York
Cincinnati	Philadelphia
Cleveland	Pittsburgh
Dallas	San Francisco
St. Louis	

REPUBLIC
IRON & STEEL CO. YOUNGSTOWN O.
PIPE & CASING

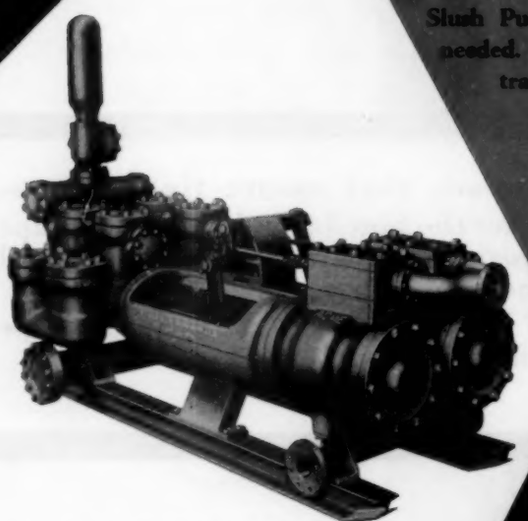
Say you saw it in The OIL WEEKLY

TITUSVILLE ACME SLUSH PUMPS

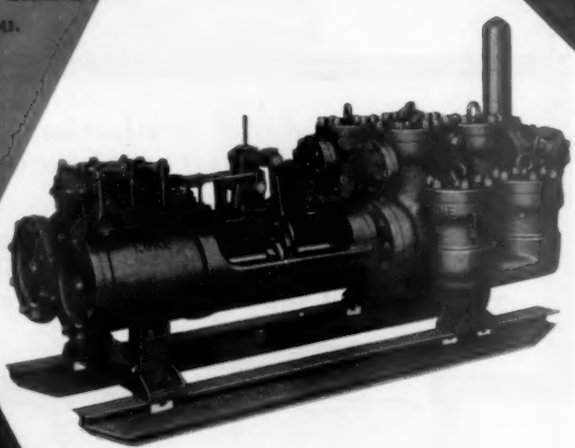
Especially Designed for Modern Rotary Drilling

Here is a real honest-to-goodness *heavy - duty* slush pump in the fullest sense of the word—a powerful pump designed for 1000 pounds fluid pressure and a steam pressure of 250 pounds—a pump powerful enough to handle the thickest kind of slush in the deepest kind of hole—a pump so designed as to provide a *direct flow* of the sediment *straight through* to the dump.

It is the kind of super-efficient Slush Pump you have long needed. Have it demonstrated to you.



Above is the larger sized 15x7¼x18 Acme Slush Pump built with extra large valve chambers and separate and interchangeable fluid and steam cylinders.



The 14x7¼x16 size has a number of the same mechanical advantages as the larger Acme Pump including a floating type spool crosshead for quick adjustment and grease gun connections at all pins.

The TITUSVILLE IRON WORKS Co.
TITUSVILLE • PENNA.

DISTRIBUTORS

The CONTINENTAL SUPPLY COMPANY

For Export
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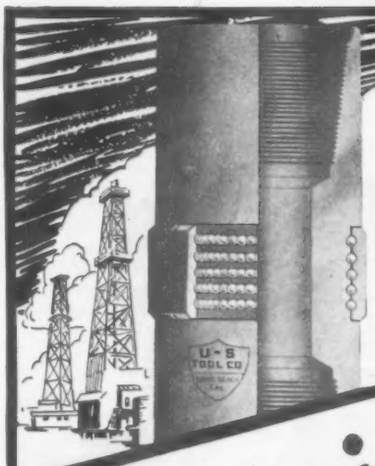

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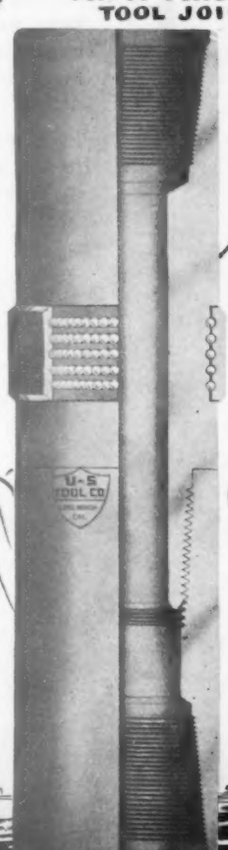

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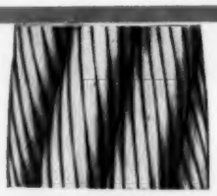

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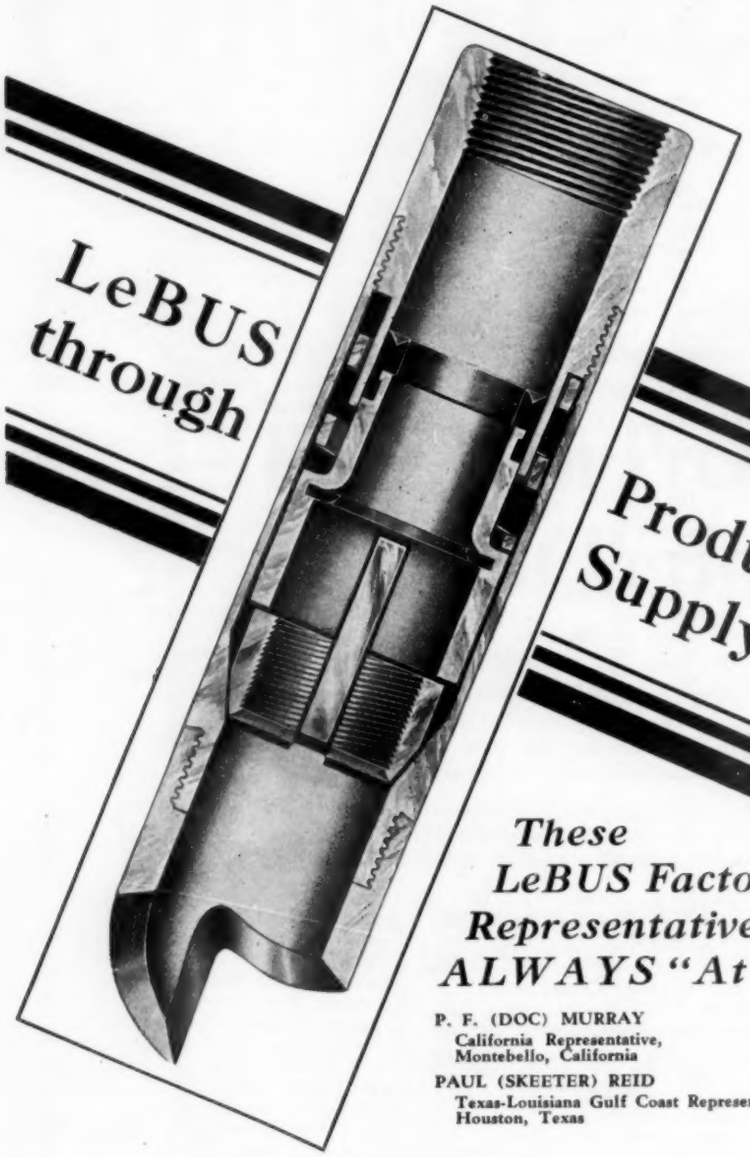

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June 22, 1928 Volume 50, No. 1

The OIL WEEKLY

Edited Weekly at Houston, Texas SPENCER W. ROBINSON, Editor

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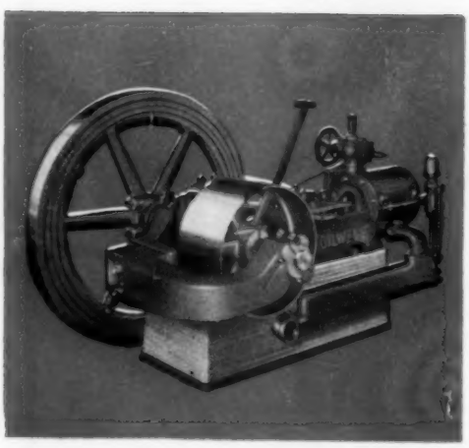

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Say you saw it in The OIL WEEKLY

Proration Strengthens Market But Prevents Advance

Success of curtailment and active demand for crude would justify price increase except for opening up of production that would follow

By KENT RIDLEY

CHANGES in daily average production last week was just sufficient to keep up evidence of the downward trend which followed the reaction of the last two weeks in May. A. P. I. estimates for last week show that while Oklahoma and Texas both show slight increases they are brought about by less important producing areas and not the fields which have been responsible for the uncertainty of the last several months. And with the exception of Oklahoma and Texas, every section shows a decrease.

Normally the law of supply and demand would decree an increase in crude prices at this time, but the supply being restricted by proration agreements and conservation department rulings in the three principal producing States, knowledge that price could bring forth volumes of oil far in excess of current consumption, from known sources, serves to retard the price advance. Both producers and buyers apparently are satisfied to have prices remain where they are, and the increase announced in the East is not looked upon as the harbinger of increase in the Mid-Continent as would have been the case in other years.

In refined products only gasoline is in big demand. The price on that commodity is strong and advancing, but burning oils are not moving and stocks are accumulating despite low prices.

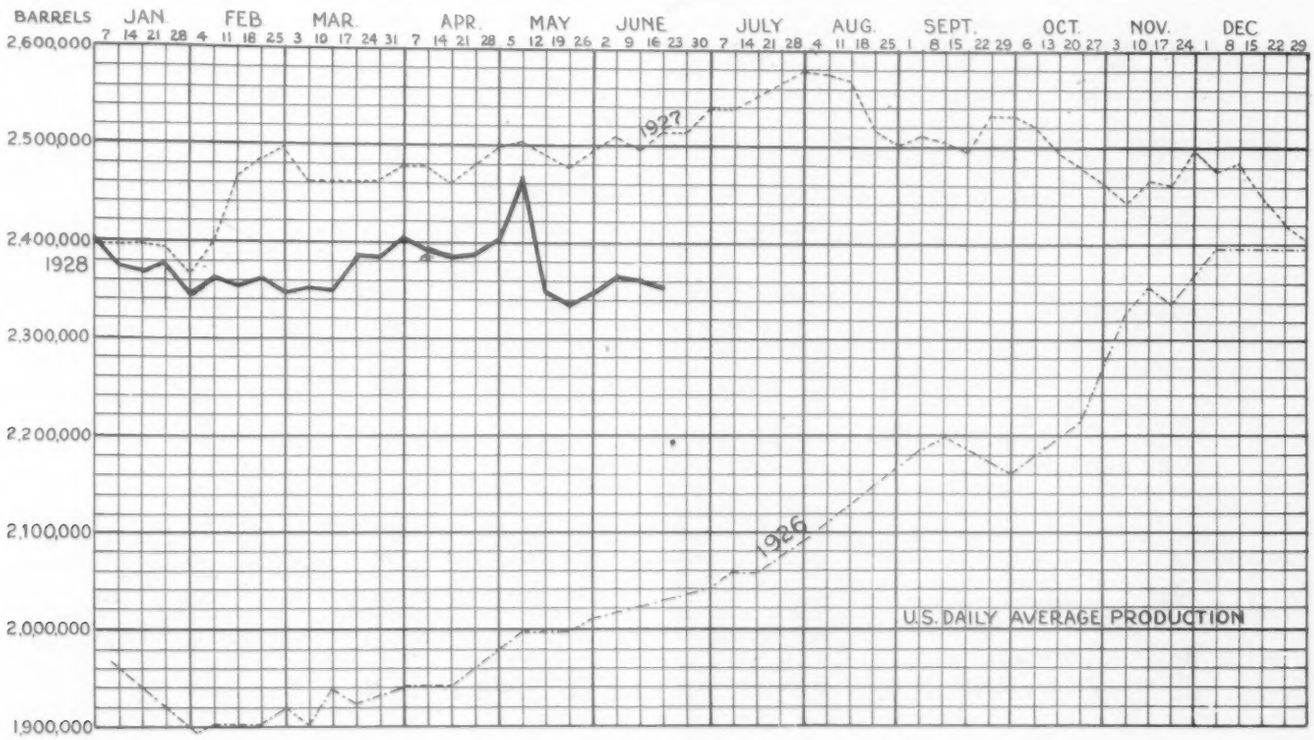
Shut In Production

Additions being made to the volume of shut in production in the West Texas district and parts of Oklahoma and California, are factors working against a general boost in crude prices. Shut-in production in the West Texas district is rapidly mounting to higher levels, with drilling under way, at a peak level in the Hendrick field while between 40 and 50 new tests on proven locations are being started in the Yates field, both of which are rated above the one million barrel daily level on potential production. However, this potential production is determined by one hour open flow gauges and does not illustrate the true condition of the field. The Chalk-Roberts field, Howard County, where 15 flowing wells in the lower pay are shut in for lack of a market, may be partially opened up shortly, as four separate groups are taking preliminary steps towards providing a pipe line outlet and market.

Enforcement of proration in the Yates, Hendricks and Chalk-Roberts fields has stabilized the West Texas crude market and no oil is being offered at a sacrifice. New contracts and spot sales for tank car delivery carry a pipe line and loading charge above the posted price of 60 cents per barrel. The Texas Company was negotiating early this week to take over the Landreth Production Corporation's producing properties in Crane and Winkler Counties, along with more than three million barrels of storage oil. A direct trunk line out of the district or a temporary line to the Southern Pacific Railroad will be built by the Texas Pipe Line Company upon completion of this deal, which promises to be the largest yet made involving West Texas properties.

The downward trend of prices on fuel oils and comparatively dull market are causing trouble for the small

UNITED STATES CRUDE PRODUCTION TREND



plant owners in the Mid-Continent and West Texas refining centers. The latter group have taken the lead in posting lower fuel oil prices because of having purchased their crude at low prices on contract over the balance of the year. North Texas plants which turn out a first class fuel oil product are finding orders difficult to obtain at 60 cents per barrel, while the kerosene market is somewhat slow at 4⅝ cents per gallon. Heavy consumption of gasoline is enabling this commodity to remain in a firm position and gradually fork its way to higher levels, although the rise has been slower for the past two weeks.

Gasoline at Mid-Continent refineries continued stronger during the week ending June 16 with the top price reaching 7⅞ cents for U. S. motor grade. Quotations ranged from 7¾ to 7⅞, and none was available at any price under the former.

No purchases for export were reported in Oklahoma or Kansas during the week, but buyers took approximately 750,000 gallons of kerosene and 500,000 gallons of U. S. Motor gasoline out of North Texas plants, all to be exported.

Magnolia Petroleum Company increased gasoline at the filling station in Oklahoma one cent to a posting of 18 cents June 14, and the new price was met generally. The cheapest cut rate gasoline procurable by the motorist in Oklahoma and Kansas now is 16 cents, and this price is not widespread.

Water white kerosene, 41-43 gravity, ranged from 4¾ to five cents during the week.

A check of fuel oil prices at Oklahoma and Kansas refineries last week showed none going at less than 65 cents per barrel. This figure was the bottom mark on low gravity fuel, while 70 was the low figure on the high gravity stuff.

Local traffic slowed up by heavy rains caused a slackening of retail gasoline sales during the week, a factor which probably kept the low selling figure for U. S. Motor gasoline below 7⅞ cents.

Mid-Continent crude producers are taking an optimistic attitude as a result of the shifting of Eastern prices upward, but from all evidence the present development of South Little River acreage, together with the Champagnolle, Arkansas, drilling boom and rapid recovery there, is holding down any possibility of a near-future increase in Mid-Continent prices, considering as the big element the actual and potential production situation.

Little River development plans, however, would not indicate that this area will be a market menace. The fact that 80 locations are being staked and started looks bad on the face of it. But a proration scheme which has worked perfectly well in West Texas, that of producing by units, will hold production at a rational figure at Little River into the fall. Until this method of proration is placed in effect there is the plan of pinching newly completed producers to 100 barrels daily, which will hold the new oil in check.

Agitation for higher crude prices is beginning to make itself felt in California. The increased demand for lighter crude, plus an increase in refinery runs to supply the demand for refined products, has been used as a weapon to bring about higher prices at the well. The larger purchasing companies believe that an appreciable increase at this time would be inconsistent, due to the recent curtailment of runs at the expense of the majority of producers. The industry is showing a steady improvement, but an increase would act as a false stimulant, it has been shown, partially defeating the conservation movement, which turned the tide upward.

Friction caused by the variance of differentials to dealers very nearly resulted in the demoralization of the California gasoline market. Many of the largest companies were engaged in a gallonage fight under cover and a serious price cut was narrowly averted. A price war probably would have resulted had the race for contracts continued at the pace set for a few days. Gasoline consumption continues slightly higher than at the same time last year and stocks are being reduced at a conservative rate.

Long Beach, now the only critical area in the State, has pushed production to the 200,000 barrel mark, but premiums are being paid for nearly all oil not under contract by the major companies. The amount involved is small but the floating supply is eagerly sought. There is a possibility that field production will start declining within 30 days.

Deep sand developments in certain Los Angeles basin fields show that drilling campaigns in other areas are not impossible. A 1500-barrel completion in the deepest sand at Seal Beach holds much promise.

The fuel oil market is showing a slight improvement, but seasonal conditions are being felt. The increase in refinery runs is reflected in fuel oil stocks, since much of the heavier product from the light crude becomes fuel oil.

Tulsa. — Roxana Petroleum Corporation made a 335-barrel well of its Bartlett 6 in the Manford field, Creek County, June 17, after shooting sand at 2879-99 feet with 40 quarts. Location is in the northeast quarter of Section 18-19-9. The well also made 750,000 cubic feet of gas.

Details on Critical Fields

	Oil Wells Completed	Total Initial Production	Initial Per Well	Number Producing Wells	Daily Production Barrels	Daily Prod. Per Well	Rigs Up	Wells Drilling
WEST TEXAS—								
Hendrick	202	840,765	4,162	208	148,730	715	35	129
Church & Fields	181	201,110	1,111	179	39,895	223	..	4
Gulf-McElroy	62	53,960	870	62	15,705	253	..	1
Yates	206	1,365,765	6,630	200	53,970	269	21	17
Totals	651	2,461,600	3,781	649	258,300	398	56	151
TEXAS PANHANDLE—								
Hutchinson County	1,101	545,050	495	969	37,040	38	5	29
Gray County	230	103,265	449	220	20,230	92	14	48
Carson County	179	59,030	330	149	6,930	47	1	10
Wheeler County	42	14,230	339	33	965	29	2	10
Totals	1,552	721,575	465	1,371	65,165	48	22	97
OKLAHOMA—								
Seminole	1,330	1,640,627	1,233	1,093	256,394*	234	38	62

(*) Production partially pinched.

Standardization Work Turns to Field Application

Specifications drawn on most of major items; codes of field practice now being pushed

By SPENCER W. ROBINSON

COLORADO SPRINGS. — With the conclusion of the semi-annual standardization conference of the American Petroleum Institute here last week, preliminary work on standards and specifications for oil field equipment has been substantially completed. Specifications have been adopted on most of the major items of field equipment and tentative designs on all other equipment are in the hands of the various committees and should be ready for final action at the annual meeting to be held in Chicago in December.

However, the more important problem: that of securing general application of standardized equipment in the field, is yet to be solved and it was with this subject with which most of those engaged in standardization work concerned themselves at the meeting here on June 12-13. It develops that while a number of articles such as belting, rig irons, derricks and rotary drilling equipment made to A. P. I. specifications have been available for some time, manufacturers are not having many orders requesting this material.

One means of correcting this condition has been suggested in the organization program of the recently created Division of Development and Production Engineering which through its regional divisions expects to sponsor a certain amount of discussion on the application and value of standardized equipment.

In the meantime the Division of Standardization is continuing its program of developing what has been termed "Codes of Practice" in the application and use of the several types of equipment included in the standardization program. Some of these codes of practice were submitted at the annual meeting of the Institute last December and have since been revised and made available to the industry.

At the meeting here last week a number of new codes were submitted and are now ready for publication. A special sub-committee of the special committee on the Standardization of Cable Drilling Tools Joints, headed by George Jaques of the Midwest Refining Company, prepared and submitted a Code of Recommended Field Practice on Cable Drilling and Fishing Tools, which after a few revisions was adopted.

Further information is being sought by the Manufacturer's Sub-Committee of the Special Committee on the Standardization of Belting on recommended practices for the application of oil field belting with a view toward publishing this data in a booklet for general distribution.

Pipe

The code on Care and Use of Pipe was approved in general by the special Committee on the Standardization of Oil Country Tubular Goods and a subcommittee was appointed to prepare a section on line pipe after which this code will be edited and issued in final form. The Code on the Care and Use of Pipe was also reviewed by the Special Committee on the Standardization of Pumping Equipment and Engines and a paper on "Care and Use of Tubing in the Field" was forwarded to the committee on tubular goods.

A code on "Care and Use of Sucker Rods" has also been prepared by the committee on pumping equipment and has been given to the general chairman of the Production Practice Committee of the Division of Development and Production Engineering for review and revision prior to its publication in tentative form.

A special sub-committee was appointed by the Special Committee on the Standardization of Rotary Drilling Equipment to consider the code on Drill Pipe and to prepare field posters. The Drill Pipe Code already formulated by the pipe committee was reviewed and several changes suggested. However, it is expected to amplify this code and include definite recommendations for re-conditioning drill pipe in the field. It is hoped by the committee to create a better standard for repair work in field repair shops.

The general distribution of these codes is expected to result in a better understanding of Standardized Equipment and thus bring about its general application in the field.

Additional Standards Adopted

Additional standards and specifications were adopted at the semi-annual conference here an some revisions were made to existing specifications. The specifications that were developed and made tentative at the annual meeting last December by the Special Committee on the Standardization of Rigs and Derricks have been made final with slight revisions and some additional specifications influencing standard rig parts and headboard connections for rotary draw works were adopted. Several recommendations were made by this committee to the Rig Iron and Rotary Drilling Committee calling for the development of additional standardized measurements that will facilitate the standardization and permit of greater interchangeability for the Standard Rig.

The Special Committee on the Standardization of Cable Drilling Tool Joints considered three smaller sizes of cable drilling tool joints which were adopted, and data on existing standards of diameters of rope socket necks, together with recommendations establishing uniform standards, were also adopted. It was also decided by this committee to increase the established maximum lengths of the box and pin collars on drilling and fishing jars. The purpose of this is to permit re-turning of the joints in the field without any change of the heat treatment.

Final designs for all sizes of steel tanks have been developed and accepted by the Special Committee on the Standardization of Steel Tanks for Oil Storage and tentative specifications for fabrication and erection and a tentative order form were given final approval at the meeting here. The sub-committee on Bolted Tanks has also agreed on specifications for such tanks and their report was accepted by the general committee.

The specifications of the Special Committee on the Standardization of Oil Country Tubular Goods were revised to include seven-inch 22-pound casing and 24½-inch 88-pound casing was eliminated.

Several minor changes were made in sucker rod specifications by the Special Committee on the Standardization of Pumping Equipment and Engines as a result of experience in the field with A. P. I. rods. It was decided to rescind the part of the specifactions which provided for a 30° chamfer on the pin and a 35° chamfer on the box recess, with the idea that manufacturers would change their practice until a form of pin and box recess was developed that would not be conductive to cross threading. No changes were made in working barrel specifications, but this committee reviewed and adopted tentative pump parts specifications which will be set up in proof

(Continued on page 44)

Digest of Semi-Annual Standardization Conference

Colorado Springs, June 12-13

COLORADO SPRINGS.—Meetings were held by all standardization committees of the American Petroleum Institute at the 4th semi-annual standardization conference held here June 12-13 with the exception of those committees consigned to "Boilers," "Rig Irons," and "Wire Rope and Manila Cordage." These last three named committees have previously established a set of standards covering their respective subjects and a further conference was not necessary at this time.

Detailed reports of the active committees meeting here last week will be made available to the industry through the Standardization Division of the Institute at some later date. In the meantime a resume of the progress made at this year's semi-annual conference has been prepared by the national chairman or acting national chairman which shows the present status of standardization work.

No Change in Specifications for Standard Oil Field Belting

By A. H. Riney

National Chairman, Special Committee on the Standardization of Belting

Meetings were held of the Belting Committee on June 12 and 13.

A meeting of the Engineers Committee with representatives of the respective classes of belting, was held at which time comments from the manufacturers were requested on the present specifications. No changes were made. All specifications have been final since the December meeting. It is recommended by the committee that a meeting be held annually in order to review and, if necessary, revise the specifications, and that the semi-annual meetings be discontinued.

The district sub-committees reported that very little work is being done by the district sub-committees, that they are depending almost entirely on the Engineers Sub-Committee to handle the work which comes up in their districts.

The American Society for Testing Materials requested that a representative of the A. P. I. Belting Committee be present at their meeting at Akron, on March 15 and 16, for the purpose of reviewing their specifications on rubber belting and ascertaining the attitude of the A. P. I. Belting Committee on the A. S. T. M. specifications. It was decided at this meeting that the A. S. T. M. specifications on rubber belting did not meet the requirements of the oil industry, so that the A. S. T. M. Committee on Belting decided unanimously to call their specifications tentative, until another specification could be developed to take its place. The general attitude of the A. S. T. M. Committee on Rubber Belting is to cooperate with the A. P. I. Belting Committee in the development of a new specification and a standard testing procedure for the A. S. T. M.

Elastic Properties

A report on the elastic properties of belting was made by L. B. Holland, which consisted of an analysis of a report along this line, made June 14, 1927, together with a report of additional tests on elastic properties, which have been run since that time. One of the conclusions drawn from this report was that the report previously made was rather incomplete, and that at the present time there is no need of further work by the Belting Committee with a view of including in the specifications an additional specification covering elastic properties.

A preliminary report, correlating field tests with laboratory tests of belt fasteners, was presented by Mr. Bowlus. No definite conclusions were made at this time, and the work is to be continued. Later a definite conclusion will be made regarding a belt fastener for the oil industry.

A report was presented by R. F. Jones, of the Russell Manufacturing Company, covering a series of tests on the internal friction of various types of belting .

All three of these reports were approved by the Belting Committee and recommended for publication.

Difficulty in Tests

Some difficulty has been experienced in the past, due to a lack of uniformity of test procedure and also to a lack of care by various testing laboratories, in making standard A. P. I. belt tests. For this reason a standard test procedure has been worked out and a committee appointed to investigate various laboratories and work out a plan of approving definite laboratories who are competent to test belts according to the standard test procedure. This committee is also instructed to report on a method for issuing to definite manufacturers the right to use the A. P. I. monogram and the method of its use.

The Manufacturers Sub-Committee was requested to submit to the Belting Committee sufficient data covering the recommended practices for the application of oil field belts, with particular reference to more conservative tables than now exists, for applying oil field belting in practice. This committee will report to the Belting Committee previous to the Chicago meeting, and it is hoped to have this information in shape to publish as a booklet for general distribution shortly after the December meeting.

A. P. I. Belt Now on Market

It developed during the interviews held with the various manufacturers that at the present time a large quantity of belting is being manufactured and used which complies with A. P. I. specifications. However, considerable comment was made upon the fact that very few companies are specifying A. P. I. belting on the purchase orders, even though they may be receiving A. P. I. belting on these orders. It is very strongly recommended that the purchasing agents be instructed to mark all purchase orders for belting, "to be manufactured according to A. P. I. specifications."

Smaller Sizes of Cable Tool Drilling Joints Accepted

By Thomas Fleming

National Chairman, Special Committee on the Standardization of Cable Drilling Tool Joints

The committee first took under consideration the adoption of three smaller size cable drilling tool joints. The detailed dimensions of these additional sizes had previously

been submitted to the committee at the meeting held in Chicago, last December, and it was at that time decided advisable to circularize the entire committee, providing each member with drawings showing all of the details. As a result of this, the committee received no adverse reports or criticisms, but discussion developed the fact that it was impossible to determine what demand there would be for the gauges controlling these joints. The committee therefore decided that it was advisable to adopt the additional sizes of joints with the provision that in case it should develop after the users of existing A. P. I. joints have been circularized that there is not sufficient demand to justify the heavy expense of manufacturing and setting up the control gauges, that these joints be proceeded with, by the manufacturers interested, in an informal way until such time as it may be advisable to establish them as official A. P. I. joints.

A special sub-committee submitted complete data on existing standards of diameters of rope socket necks together with recommendations establishing uniform standards. These recommendations were adopted.

Increase Lengths of Box and Pin Collars

A resolution was also adopted by the committee to increase the established maximum lengths of the box and pin collars on drilling and fishing jars. The purpose of this is to permit re-turning of the joints in the field without any change of the heat treatment.

The committee recommended that the Dallas office of the Pittsburgh Testing Laboratory be made custodian of the gauges for the Mid-Continent District, provided this fitted in with the plans of the Rotary Drilling Equipment Committee.

The committee also passed a resolution that all owners of master gauges should now be advised to send their gaugs to the nearest custodian of regional master gauges in the near future for checking.

H. W. Bearce of the U. S. Bureau of Standards, submitted a report covering a checkup which has just been made at Washington on the regional master gauges. This report showed that these gauges are all satisfactory and with one or two exceptions well within the tolerances. Some of the gauges, however, not in very good surface condition, apparently due to the fact that they have been stored in contact with each other. It developed in the course of discussion that when gauges are put away screwed together that the slushing compound used to protect them does not always prevent the electrolytic action causing pitting. This even happens between two very highly polished surfaces which are cleaned and carefully greased, but put away in stacks, that is, with the finished surfaces in contact. It is very desirable in storing master gauges to have them covered with the proper slushing compound, but put away without being in contact with one another.

Discussion on Jars

C. C. Scharpenburg, during the course of discussion, raised the question as to the advisability of establishing diameters on the reins of jars that would be in conformity with box collar diameters. Very thorough discussion of the entire jar situation developed and it was concluded that it was within the province of this committee to go into the matter of possibly developing standard sizes and dimensional standards for jars. It was also considered advisable to make recommendations on the sizes of joints to be run in the various established sizes of A. P. I. pipe. The chairman was authorized to appoint a committee to go into this matter, consulting with some of the principal operators and manufacturers, and report recommendations at the next meeting. The chair appointed a committee consisting of Messrs. Spang, Hinderliter, Williams, and Mapes, to go into this subject.

A special sub-committee of this committee, headed by Mr. George Jaques of the Midwest Refining Company, prepared and submitted a Code of Recommended Field Practice on Cable Drilling and Fishing Tools, at the meeting held in Chicago last December. This code has been circularized amongst all the members of this committee and has also been submitted to the experts of several of the large steel companies. It appears that the code meets with general approval. Several additions were suggested and after thorough discussion the code was adopted with these additions.

Posters Suggested

It was the unanimous opinion of the committee that suitable posters should be prepared covering the essential items of the code and properly illustrated. A special commitee consisting of C. T. Mapes, F. J. Spang, F. J. Hinderliter was appointed with authority to prepare immediately, suggestions for such a poster and submit their recommendations to C. A. Young, Director of Standardization.

Slight Revisions Made in Specifications For Standard Rigs and Derricks

By W. W. Fondren

National Chairman, Special Committee on the Standardization of Rigs and Derricks

The Committee on Standarization of Standard Rigs and Derricks convened in the morning of June 12 and were busy throughout the day, finishing their work at noon, June 13.

They were preceded by a meeting of the Steel Derrick Manufacturers' sub committee, held Monday, June 11.

The Engineering sub-committee and the Manufacturers' sub-committee held a point meeting on the night of June 12.

Specifications Made Final

Those specifications which were developed and made tentative at the Chicago meeting were made final and a few slight revisions were made to some of the other specifications. Some additional specifications influencing standard rig parts and headboard connections for rotary draw works were developed and adopted.

Several recommendations were made to the Rig Iron and Rotary Drilling Equipment Committees calling for the development of additional standardized measurements that will facilitate the standardization and permit greater interchangeability for the standard rig.

Standard rig and derrick specifications have been available to the industry since their adoption at the last annual meeting and several manufacturers have received their license to manufacture A. P. I. Standard Derricks.

A. P. I. Standard Derricks are now also being advertised by some manufacturers.

The A. P. I. Code of Recommended Field Practice for Rigs and Derricks, first edition, has been printed in proof copy, and with some corrections and additions made, will soon be ready for final printing and distribution.

Changes Suggested for Black Threads Allowable in Tubular Goods

By Charles Fitzgerald

National Chairman, Special Committee on the Standardization of Oil Country Tubular Goods

The committee held meetings on the morning and afternoon of June 12 and on the morning of June 13.

The following additions to Specification 5-A were made:

7" 22-lb. Casing, Table 1-A.

The following deletion was made:

24½" 88-lb. Casing, Table 1.

It was decided to add to the specification an illutsration of upset casing similar to that now shown for upset drill pipe.

The question of collapsing pressure of casing was discussed generally and the following changes were approved:

1. The elimination of the table of collapsing pressures from the specifications.
2. The inclusion of complete tables in the Code.
3. The basis of calculation to be changed from .434 to .500 lbs, per foot of fluid column.
4. The figures to be raised from 30% to 40% for the increase over lap weld pipe for seamless pipe having the tensile strength and yield point of Grade C.

The question of chamfer on ends of casing and tubing couplings was discussed and it was decided to include full size sketches of this detail, showing proportions rather than exact dimensions which would have to be varied for each size.

In the event that the specifications be re-issued in letter-size sheets, this committee recommends that the Specications 5-A and 5-L be also continued in full in their present form.

Protectors to Be Used

The pipe users present were unanimous in their opinion that protectors be used in the ends of casing couplings during shipment. On account of the expense involved, it was decided to take a letter ballot of the entire committee before adding this provision to the specification.

A sub-committee consisting of T. D. Davies, C. R. Barton and A. Milne were appointed to prepare a standard form for ordering A. P. I. Tubular Goods.

A request for the addition of 7⅝" casing was received and discussed. It was decided that requests of this kind could not receive consideration from the committee unless accompanied by a drawing showing the complete string and also a full description of conditions requiring this new size.

May Raise Limit on Black Threads

After a long discussion of the question of black threads, a sub-committee composed of Mr. Davies and Mr. Barton made the proposal that the present limit of three black threads among the perfect threads be changed to two black threads for the ¾ taper, 8-thread, and five black threads for 3/8 taper, 10-thread size. It was decided to submit this question by letter ballot to the full committee membership.

The Engineering Sub-Committee submitted a report on cooperation with the A. S. T. M. Joint Committee on the Effect of Phosphorus and Sulphur in Steel, which recommends a modified program involving no large expenditures or need of A. P. I. appropriation. This report was adopted and it was indicated that ample assistance from ten oil companies, as requested in the report, would be available.

Code on Care and Use of Pipe Approved

The Code on Care and Use of Pipe was approved in general. Comments on tubing have been received from the Pumping Equipment Committee and on Drill Pipe from the Rotary Drilling Committee. A sub-committee composed of Mr. Heltzel and Mr. Graham will write a section on Line Pipe. After this has been received, the Code will be edited and issued in final form.

It was brought out in the general discussion that the standard A. P. I. string of casing is not in general use in any district; also that a considerable amount of pipe is being ordered A. P. I. except in regard to threads; that the principal sizes are 8⅝" 7" O. D., which is being ordered 8 thread, 10¾", which is being ordered 10 thread; and also 2½" tubing, which is ordered 11½ thread.

The Committee urgently recommends to the Division of Production and Development of Engineering that it include in its program a serious study of casing strings for various districts and the comparisons of the strength of joint of A. P. I. casing with that of other threads now being ordered in preference to the A. P. I. thread. It is also recommended that these matters be made the subjects for papers and discussion at the next regular joint meeting of both divisions.

Several New Standards Adopted for Rotary Drilling Equipment

By E. J. Nicklos

National Chairman, Special Committee on the Standardization of Rotary Drilling Equipment

Standard Connections for Swivel Goose Necks

The tentative specification previously submitted was finally approved and publication authorized for general circulation.

8⅝" Drill Pipe

Tentative specifications were adopted on 8⅝" drill pipe with the recommendation that these specifications be circulated to the industry, especially the various districts for comment and study. Final action will be taken at the annual meeting in December.

Standard Connections for Head-boards

Agreement was reached with the Rig and Derrick Committee and these specifications as previously published as tentative were finally adopted and will be included in A. P. I. Standards No. 4.

Standard Beam Widths for Crown Blocks

It is agreed not to establish any standard upon this item.

Gauging Practice on Rotary Drilling Taper Joints

It is agreed to leave the present practice without change until after the official gauges are received. These gauges are expected to be delivered some time in the late summer or early fall.

Standoff of Drill Pipe in Tool Joints at Hand-tight Bit

The recommendations from the California District were accepted for the 6⅝" and 5 9/16" sizes. It was agreed to leave unchanged the standoff on the other sizes pending further information from the various districts.

3½" and 2⅜" Gauges

California reported that in their judgment these two sizes of taper joints were not correct. A very extensive report was presented setting out the information and their suggested changes. It was agreed therefore to hold up the gauges on these two sizes and recommended that a questionnaire be prepared and mailed to each district reciting the California experience and requesting -their opinion.

Group Order of Gauges

S. B. Terry, of Pratt & Whitney, reported on the status of the large group order recently assembled. He reported that the three larger sizes should be ready for delivery inside of the next thirty to sixty days, with the smaller sizes following. The left-hand gauges will follow in the same order as the right-hand gauges are delivered.

General

No action was taken relative to establishing standards on the 6½" and 7" shafting inasmuch as national standards have not yet been completed by the A. S. M. E.

It was agreed not to recommend the elimination of ⅝" and ⅞" wide keys from the national standards, and the A. S. M. E. to be so advised.

It was agreed to reopen the question of the Sprocket Tooth Form which was dropped as an official standard at Chicago. It was agreed that a standard could be adopted that would prove more satisfactory than the compensating tooth form. A very thorough investigation will be made and complete tests arranged for before final action is taken.

Committee on Code

A special sub-committee was appointed to review the code on Drill Pipe and also to prepare field posters who will report at the next meeting. The Drill Pipe Code already formulated by the A. P. I. Pipe Committee was reviewed and several changes suggested. However, it is expected to amplify this code and include definite recommendations for re-conditioning drill pipe in the field. It is hoped in this way to create a better standard for repair work in field repair shops.

Standards on Pumping Equipment and Engines Meeting with Favor

By T. E. Swigart

National Chairman, Special Committee on the Standardization of Pumping Equipment and Engines

A. P. I. standards for oil well tubing have been in effect almost two years and are proving satisfactory. However the committee has recommended to the Pipe Committee that an addition be made to the Pipe Specifications to provide for a slight reaming of the inside of tubing ends to insure ready passage for plungers or cups. The committee also discussed a report that A. P. I. tubing had "hung up" on casing joints in one well. As the present specifications provide for a chamfer on tubing collars, it was decided that this trouble must have been due to a lack of sufficient reaming of the inside of ends on certain joints of casing in this one particular well in which the trouble was encountered.

Several minor changes were made in Sucker Rod Specifications as a result of experiences in the field with A. P. I. rods. Several reports of cross threaded joints have been received and a discussion in the committee meeting brought out the fact that the exact cause of cross threading was not known with certainty. It was decided, however, to rescind the part of the specifications which provided for a 30 degrees chamfer on the pin end a 35 degree chamfer on the box recess, with the idea that manufacturers would change their practice until a form of pin end and box recess was found which was not conducive to cross threading. In the course of one or two years it is the committee's intention to replace this specification as a result of information that it is expected to obtain in practice.

"No-Go" Gauges Ready

A representative of the U. S. Bureau of Standards and Pratt & Whitney Company, gauge manufacturers, advised the committee that all "no-go" gauges for Sucker Rods were completed, registered and ready for distribution. However, due to several minor changes in details of Sucker Rod specifications, work on "go-gauges" has been delayed, with the result that these will not be available for shipment for several weeks. Meanwhile, rod manufacturers are making rods as closely to A. P. I. Standards as possible, with the understanding that in so doing and advertising these rods as A. P. I. rods, they are doing so at their own responsibility. The possibility of future difficulty in interchangeability was brought to the attention of rod manufacturers. It is gratifying to learn that the A. P. I. form of Sucker Rod joints is fast coming into universal use.

Practically no changes were made in Working Barrel Specifications. The committee, however, reviewed and adopted tentative pump parts specifications which will be set up in proof form for further review and final adoption at the Chicago meeting.

The committee rescinded its action in specifying a so-called plain end pull rod as A. P. I. Standard with the result that the upset or reinforced pulley rod is now the only Standard Pulley Rod. This action was justified by a unanimous opinion among the committee members that a reinforced pull rod is a much better design than that of plain pull rods, and this together with the small difference in cost justifies operators in practically all cases in buying this type of rod.

The committee ratified specifications on bore, keyways, and tolerances in pulleys as well as shaft dimensions for use with Standard A. P. I. counter shaft assemblies.

Standard rating test forms for single and multiple cylinder gas engines of non-diesel types were reviewed and adopted finally with certain minor modifications. Standards also were adopted for Air Intake specifications for gas engines as well as for taps in cylinder casings of single cylinder engines for attachment of indicators.

A standard rating test form for electric motors was adopted in tentative form and will be brought up for review and ratification at the Chicago meeting.

The committee's representative on the National Committee on Motor Standardization under the sponsorship of A. S. M. E. and the National Electric Manufacturers Association, reported on the progress of the National Committee on Standardization of Motor Frame Dimensions. The committee decided to delay standardization of motor frame dimensions temporarily in hopes that national motor standards would be developed. These could then be considered in developing A. P. I. Standards.

The A. P. I. Code No. 5, "Care and Use of Pipe," was reviewed in so far as it relates to oil well tubing and a paper on "Care and Use of Tubing in the Field," prepared under the direction of the National Chairman, was forwarded to the National Chairman of the A. P. I. Committee on Oil Country Tubular Goods for inclusion in the pipe code.

Code on Sucker Rods Prepared

A tentative motion on "Care and Use of Sucker Rods," also prepared under the direction of the National Chairman and has been handed to the chairman of the Committee on Production Technique of the Division and Production Engineers for review and revision prior to its publication in tentative form.

The committee is glad to report that A. P. I. Standards on Pumping Equipment and Engines are meeting with general favor and are being widely adopted. So far no serious difficulty in the standards have been discovered, although as mentioned there are some minor modifications in a few specifications.

Final Designs Drawn for Tanks With Riveted Shells

By G. O. WILSON

Acting National Chairman, Special Committee on the Standardization of Steel Tanks for Oil Storage

At the Chicago meeting the general design specifications for tanks with riveted shells were finally approved by the Board of Directors. The details of design for the tanks provided for in these specifications were endorsed by the Special Committee, subject to final engineering check; and the preparation of design drawings for the seven sizes of tanks included in the specifications, was authorized. Since all details to be included in the drawings could not be adequately discussed at the Chicago meeting, the charman was authorized to circulate a questionnaire to all committee members covering all points on which there was any difference of opinion; and it was agreed that majority answer on any point in this questionnaire should govern the design. It was also decided that the design specifications should be supplemented with specifications for fabrication and erection, together with a form to be used as a guide in ordering A. P. I. standard tanks.

FINAL DESIGNS ADOPTED

As a result of the engineering check, and the replies received to the questionnaire, final designs for all sizes have been completed and were approved at the present meeting. Tentative specifications for fabrication and erection, and a tentative order form, were circulated to the committee in advance of this meeting, and were also given final approval at the meeting.

The Sub-Committee on Bolted Tanks has agreed on specifications for such tanks, and their report has been accepted by the special committee .

The Special Committee for the Standardization of Steel Tanks now recommends to the General Committee on Standardization the acceptance and publication of the complete design, fabrication and erection specifications for tanks with riveted shells, together with appendices containing the recommened order form, and detailed drawings; also the specifications for bolted tanks.

One other item considered at Chicago was the proposed inclusion of drawings for certain appurtenances commonly used on tanks. Tentative designs for such appurtenances were distributed to the committee in advance of this meeting, and were discussed at the meeting; but the committee is not yet ready to make any definite recommendations on these resigns.

The committee voted that in the future any major changes in the specifications or designs should not be made unless all members had been advised of the proposed changes in writing at least one month in advance of the meeting at which they are to be considered.

Semi-Annual Standardization Conference Registration List, 1928

Name, Business Address—	City
E. R. Ames, Elliott Core Drilling Company	Houston
H. Anderson, Shell Company of California	Los Angeles
E. L. Andrews, Northern Group of Pipe Lines	Lima, Ohio
M. T. Archer, National Supply Company	Toledo, Ohio
O. H. Attridge, Lucey Manufacturing Corporation	Chattanooga
J. O. Ballagh, Patterson-Ballagh Corporation	Los Angeles
W. M. Barclay, R. & J. Dick Company	Passaic, N. J.
C. R. Barton, Spang-Chalfant & Co., Inc.	Ambridge, Pa.
W. F. Barnes, Westinghouse Electric & Manufacturing Company	Tulsa
H. H. Beagle, Rock Glycerine Company	Midwest, Wyoming
H. W. Bearce, Bureau of Standards	Washington
C. E. Beecher, Empire Oil and Refining Company	Bartlesville
E. L. Bell, Shaffer Oil & Refining Company	Drumright
E. O. Bennett, Marland Oil Company	Ponca City
Wm. G. Benninghoff, The Pipe Machine Company	Cleveland
Oscar Bieler, Oil Well Supply Company	Pittsburgh
H. W. Bishop, Jr., Harrisburg Pipe and Pipe Bending Company	Harrisburg, Pa.
C. H. Black, Tubbs Cordage Company	Tulsa
L. S. Black, Beaumont Iron Works Company	Beaumont
Richard R. Bloss, International Derrick Equipment Company	Columbus
Harry Botsford, Society for Development of Internal Combustion Power	Titusville
W. R. Boyd, Jr., A. P. I.	New York
Douglas R. Brown, The O. C. S. Mfg. Company	Coffeyville, Kansas
N. G. Bruce, The Rubber Association of America	New York
L. L. Brundred, Brundred & Brundred	Los Angeles
H. E. Burns, American Tank Company	Oklahoma City
A. E. Butts, A. O. Smith Corporation	Tulsa
Arch F. Campbell, Fenwick-Reddaway Manufacturing Company	Tulsa
O. M. McCargar, Allis-Chalmers Manufacturing Company	Houston
L. M. Cargo, Westinghouse Electric Company	Denver
M. G. Cheney, Ansac Oil Corporation	Coleman, Texas
W. L. Childs, Reed Roller Bit Company	Houston
H. V. Churchill, Aluminum Company of America	Pittsburgh
J. K. Clark, Baash-Ross Tool Company	Houston
V. A. Costler, Rubber Association of America	New York
Kenneth A. Covell, I. T. I. O. Company	Bartlesville
T. J. Cullen, Elliott Core Drilling Company	Los Angeles
W. T. Cushing, W. K. M. Manufacturing Company	Houston
D. R. Dale, The S. M. Jones Company	Toledo
T. D. Davies, National Tube Company	Pittsburgh
Mark W. Daw, Shell Company of California	San Francisco
Donald E. Dickey, General Petroleum Corporation	Los Angeles
James J. Dillon, National Tube Company	Lorain, Ohio
Brick Elliott, Elliott Core Drilling Company	Los Angeles
Karl L. Elliott, Acme Fishing Tool Company	Parkersburg, W. Va.
V. L. Elliott, Atlantic Refining Company	Philadelphia
W. S. Evans, Lucey Products Corporation	New York
R. R. Fanska, West Coast Lumber Bureau	Longview, Wash.
D. S. Faulkner, National Supply Company	Torrance, Cal.
A. S. Feild, Roxana Petroleum Corporation	Pyote, Texas
F. F. Fendly, Humble Oil & Refining Company	Baytown
J. A. Fenwick, Fenwick-Reddaway Mfg. Company	Newark, N. J.
Chas. Fitsgerald, Pure Oil Pipe Line Company	Dallas
Thos. Fleming, Jr., Oil Well Supply Company	Pittsburgh
H. W. Fletcher, Hughes Tool Company	Houston
W. W. Fondren, Humble Oil & Refining Company	Houston
F. A. Funk, American Steel Derrick Company	Tulsa
Walter Geist, Allis-Chalmers Manufacturing Company	Milwaukee
Frank E. E. Germann, University of Colorado	Boulder
J. Burr Gibbons, International Petroleum Exposition	Tulsa
W. N. Glab, Morrison Brothers	Dubuque, Iowa
E. J. Gorman, Twin State Oil Company	Tulsa
J. B. Graham, National Tube Company	Pittsburgh
E. E. Greve, Oil Well Supply Company	Pittsburgh
E. H. Griswold, Marland Production Company	Ponca City
E. F. Guidinger, Phillips Petroleum Company	Bartlesville
C. H. Guy, Youngstown Sheet & Tube Company	Youngstown, Ohio
Floyd B. Hall, Tidal Oil Company	Tulsa
J. A. Hall, Kansas City Structural Steel Company	Kansas City, Kansas
Rex Hamaker, Humble Oil & Refining Company	Houston
W. J. Hampton, Spang-Chalfant & Company	Pittsburgh
D. B. Harris, Humble Oil & Refining Company	Shreveport
Z. F. Harshton, Imperial Belting Company	Chicago
W. P. Haseman, Marland Companies	Ponca City
Charles E. Hathaway, Stanley Belting Corporation	Chicago
W. G. Heltzel, Sinclair Pipe Line Company	Tulsa
Jos. W. Hays, Mid-Continent Petroleum Corporation	Tulsa
Edwin Higgins, Chamber of Mines & Oil	Los Angeles
Edgar G. Hill, Ford, Bacon & Davis, Inc.	Colorado Springs
Frank J. Hinderliter, Hinderliter Tool Company	Tulsa
A. C. Horner, National Lumber Manufacturers' Assn.	San Francisco
A. P. Holloway, Jones & Laughlin Steel Corporation	Ft. Worth
L. B. Holland, Phillips Petroleum Company	Bartlesville
J. F. Hough, Portland Cement Association	Chicago
F. Hoving, Spang-Chalfant & Company	Houston
R. W. Howe, Atlantic Oil Producing Company	Dallas
Wilhelm Jardh, Axelson Machine Company	Los Angeles
R. F. Jones, Russell Manufacturing Company	Middletown, Conn.
Lester Keim, Oil Well Supply Company	Los Angeles
L. P. Keith, West Coast Lumber Bureau	Longview, Wash.
R. B. Kelly, Pure Oil Company	Fort Worth
G. I. Keniston, Standard Oil of California	San Francisco
James F. Kimbell, Gallagher Company	Los Angeles
Wm. A. Knapp, Butler Manufacturing Company	Kansas City
D. R. Knowlton, Phillips Petroleum Company	Whittenburg, Texas
Chas. Krause, Lee C. Moore Company	Tulsa
A. D. Kunze, Rubber Association of America	New York
H. W. Ladd, Midwest Refining Company	Casper
W. H. Lawry, Axelson Machine Company	Los Angeles
A. B. Leonard, Haynes Stellite Company	Los Angeles
B. W. Letcher, Standard Oil Company of California	San Francisco
A. E. Lidderdale, Spang & Company	Butler, Pa.
Terrell T. McCarty, The McCarty Company	Los Angeles
Glenver McConnell, Roxana Petroleum Corporation	Tulsa
J. D. McEwen, Lee C. Moore & Company	Pittsburgh
F. Ray McGrew, Standard Pipe Line Company	Shreveport
Edw. C. McSheehy, Republic Iron & Steel Company	Denver
J. R. McWilliams, Skelly Oil Company	Tulsa
Charles E. Markey, Link Belt Company	Indianapolis, Ind.
H. N. Marsh, General Petroleum Corporation	Los Angeles
Walter H. Meier, Atlantic Oil Producing Company	Dallas
H. A. Melat, Gulf Production Company	Fort Worth
C. W. Metzger, Haynes Stellite Company	Houston
R. Van A. Mills, U. S. Bureau of Mines	Bartlesville
A. Milne, Jones & Laughlin Steel Corporation	Pittsburgh
F. W. Mohler, International Derrick & Equipment Company	Columbus
Adrian Moore, Rycade Oil Corporation	Houston
S. J. Moore, Oklahoma Steel Casting Company	Tulsa
Geo. L. Morehead, Link Belt Company	Philadelphia
Geo. B. Morris, Bradford Motor Works	Bradford, Pa.
Wm. M. Neckerman, Republic Iron & Steel Company	Youngstown, O.
E. J. Nicklos, The Texas Company	Tulsa
W. S. Nicoll, Midwest Exploration Company	Amarillo
K. B. Nowels, U. S. Bureau of Mines	Laramie, Wyo.
C. H. Nugent, Russell Manufacturing Company	Chicago
M. B. Oberlee, Ford, Bacon, Davis, Inc.	Colorado Springs
W. H. O'Brien, Southern Pine Association	Chicago
J. C. O'Donnell, Great Northern Tool and Supply Co.	Billings, Mont.
E. B. Oglesby, Russell Manufacturing Company	Chicago
Linn K. Park, Portable Rig Company	Houston
R. F. Passano, American Rolling Mill Company	Middletown, Ohio
Harry F. Perkins, Gulf Refining Company	Port Arthur
J. Edgar Pew, Sun Company	Dallas
Wallace E. Pratt, Humble Oil & Refining Company	Houston
W. H. Price, Black, Sivalls & Byson	Casper
L. W. Prunty	Tonkawa, Okla.
F. O. Prior, Dixie Oil Company	Shreveport
J. Otis Redenbaugh, Wertsberger Derrick Company	Tulsa
John Reid, Joseph Reid Gas Engine Company	Oil City, Pa.
A. H. Riney, Phillips Petroleum Company	Bartlesville
A. S. Ritchie, Marland Oil Company	Ponca City
E. E. Robbins, C. F. Camp Company	Tulsa
J. M. Roberts, Riter-Conley Company	Pittsburgh
D. G. Safford, J. D. Collett	Fort Worth
Walter Samans, The Atlantic Refining Company	Philadelphia
A. D. Sanderson, Standard Oil Company	Elizabeth, N. J.
C. C. Scharpenberg, Standard Oil Company of California	Bakersfield
Wm. Schwemlein, The Parkersburg Rig & Reel Co.	Parkersburg, W. Va.
Kenneth C. Sclater, Marland Production Company	Ponca City
W. W. Scott, Humble Oil & Refining Company	Houston
John H. Sennett, Jones & Laughlin Steel Corporation	Pittsburgh
R. S. Shannon, Continental Oil Company	Denver
D. R. Shouvlin, Superior Gas Engine Company	Springfield, Ohio
R. F. Shumaker, Prairie Pipe Line Company	Independence
J. C. Siegle, Youngstown Sheet & Tube Company	Youngstown
H. B. Simcox, Continental Oil Company	Denver
Wm. Simpson, The California Company	Colorado, Texas
L. N. Slater, Western Pipe and Steel Company	Los Angeles
Earl C. Sleeman, Pittsburgh Steel Products Company	Monessen, Pa.
A. M. Smith, Gulf Companies	Houston
Geo. F. Smith, Continental Oil Company	Denver
W. A. Sniffen, Magnolia Pipe Line Company	Dallas
F. J. Spang, Spang & Company	Butler, Pa.
H. M. Staggs, Atlantic Oil Producing Company	Dallas
E. E. Stevenson, D. & B. Pump & Supply Company	Los Angeles
H. M. Stevenson, Humble Pipe Line Company	Houston
D. V. Stroop, A. P. I.	New York
T. E. Swigart, Shell Company of California	Los Angeles
E. P. Tallant, Union Oil Company of California	Los Angeles
W. C. Taylor, Standard Oil Company of Louisiana	Shreveport
M. W. Teats, R. & J. Dick Company	Kansas City
Spencer B. Terry, Pratt & Whitney Company	Hartford, Conn.
H. G. Texter, Spang-Chalfant & Company	Tulsa
W. C. Thomas, Vacuum Oil Company	Houston
Willis H. Thompson, Oil Well Supply Company	Pittsburgh
Edward Timbs, National Supply Company of California	Torrance
W. B Tobin, International Derrick & Equipment Company	Los Angeles
David L. Trax, Gypsy Oil Company	Tulsa
W. A. Trout, Emsco Derrick & Equipment Company	Los Angeles
W. C. Trout, Lufkin Foundry & Machine Company	Lufkin, Texas
Harold Vance, Marland Production Company	Big Spring, Texas
Edwin Vollrath, Victor & Textile Belting Company	Easton, Pa.
David Wallace, Western Supply Company	Tulsa
J. S. Warren, Maloney Tank Manufacturing Company	Tulsa
C. D. Watson, Carter Oil Company	Tulsa
C. R. Weidner, The Prairie Pipe Line Company	Independence
C. R. Weiss, Link Belt Company	Indianapolis
H. O. Wells, Patterson-Sargent	Tulsa
Brinton Welser, Chain Belt Company	Milwaukee
D. D. Wertzberger, Wertzberger Derrick Company	Tulsa
C. E. Whitney, Baker Casing Shoe Company	Huntington Park, Cal.
Edward B. Wilber, Aluminum Company of America	Tulsa
E. E. Wild, Columbian Steel Tank Company	Kansas City
David R. Williams, Williams Brothers	Tulsa
Russell J. Williams, Southern Manganese Steel Company	St. Louis
Deck Wilmoth, National Turnbuckle Derrick Company	Tulsa
G. O. Wilson, Standard Oil Company of California	San Francisco
R. A. Wilson, The Guiberson Corporation	Dallas
Geo. F. Winters, Phillips Petroleum Company	Bartlesville
Fred E. Wood, Midwest Refining Company	Casper
H. C. Yarbrough, Union Oil Company	Brea, Cal.
C. A. Young, Division of Standardization	Dallas
Hayes W. Young, Midwest Refining Company	Midwest, Wyo.
Robert A. Young, Marion Machine, Foundry & Supply Company	Salt Creek, Wyo.
C. V. Alcorn, Roxana Petroleum Corporation	Dallas
M. G. Brennan, Stearns-Roger Manufacturing Company	Denver
J. E. DeLong, Waukesha Motor Company	Waukesha, Wis.
E. S. Dixon, The Texas Company	Port Arthur
G. C. Gester, Standard Oil Company of California	San Francisco
J. H. Holland, Hendric & Bolthoff Company	Denver
C. H. Jay, Pure Oil Company	Chicago
R. S. Knappen, Gypsy Oil Company	Tulsa
Raymond T. Moore, Standard Oil Company (N. J.)	New York
G. Raymond, Black, Sivalls & Bryson	Kansas City
G. N. Robinson, General Electric Company	Denver
Melbert Schwarz, Rio Bravo Oil Company	Houston
John R. Suman, Humble Oil & Refining Company	Houston
Robert L. Wright, Gypsy Oil Company	Tulsa
Jas. Hutcheson, Rio Bravo Oil Company	Houston

Engineering Division Wants Data On Field Methods

Committees will study problems of drilling and production; Technical discussions held at Colorado Springs

COLORADO SPRINGS—A general meeting of the recently created Division of Development and Production Engineering was held here June 14-15, in connection with the semi-annual meeting of the Standardization Division of the American Petroleum Institute. Although organization meetings have been held by each of the five regional divisions of the new department, this is the first general session to be held since the department was authorized at the annual meeting of the Institute in Chicago last December.

A semi-technical program was followed, with the first day being devoted to reports from the chairmen of the several committees appointed some time ago to prepare definite programs covering a number of special subjects relating to the development and production of oil. Reports were also made at this session on the progress of the standardization of oil field equipment by members of the several standardization groups with a view of better familiarizing the field men, production executives and engineers with the scope and value of this work.

A night session of the general committee of the new division was held on this day for the purpose of developing a method of procedure in carrying out the work of the department and to dispose of other routine business connected with the general organization plan. Committees were definitely established on the two principal subjects to be considered by the department with C. E. Beecher as chairman of the committee on Production Practice, and H. H. Anderson, chairman of the Committee on Drilling Practice. The committtee previously appointed to consider subjects dealing with electrification was consolidated into a general committee on "Prime Movers" which, with the committees on Production Research and Metallurgy of Oil Field Equipment will serve as sub-committees to the two main committees.

Considerable discussion was had on the types of programs to be conducted by the regional divisions and how these programs should be developed. It was the general opinion that the chairman of the two main committees on Drilling Practice and Production Practice should outline a number of particularly important subjects which should be included in the programs of regional meetings thus bringing together at the general division a compilation of the best available information on these subjects which could be issued in bulletin form as a reference work on that particular subject.

The subjects to be given preference in the work of the new division are to be prepared by the chairmen of the two committees as soon as possible and submitted to the regional chairman. Papers presented at the regional meetings should be short, it was decided, and no material should be released unless it has passed the publications committee which will be composed of the regional chairman, the chairman of the regional program committee and the chairmen of the regional committees on Drilling Practice and Production Practice.

Meetings of the general division have been suggested to conform with the annual meeting of the Institute and the semi-annual Standardization Conference, while meetings of the regional divisions should be held at three months periods equally divided between these dates.

At the second day of the meeting special papers dealing with subjects pertaining to the drilling and production of oil were presented and discussion was made from the floor.

A paper was presented by Fred E. Wood of the Midwest Refining Company on "Operating Practice in the Rocky Mountain District," in which the development and use of electricity in this territory was stressed.

A paper on "Drilling and Production Methods in West Texas Fields" was given by H. J. Vance of the Marland Oil Company, and a paper on "Deep Drilling in the Appalachian Field, Cable Tool Method," by J. F. Robinson of the Peoples Gas Company, and J. G. Montgomery, Jr., of the United Natural Gas Company, was read by title only.

Other papers presented at this session were: "Methods of Effecting Gas Conservation and Increased Recovery Efficiency in Ventura Field," by T. E. Swigart, Shell Company of California; "Method of Appraising Results of Production Control of Oil Wells," by H. N. Marsh, General Petroleum Corporation of California, and "The Influence of Colloids and Suspensoids on the Solubility of Gases in Liquids," by Dr. Frank E. E. Germann, University of Colorado.

Golf Tournament

Colorado Springs—Charles E. Markey, with the Link Belt Company at Indianapolis, won the president's trophy for the low net score at the Golf Tournament held on the Broadmoor Golf Course here June 16, in connection with the meeting of the Standardization Division and the Division of Development and Production Engineering of the American Petroleum Institute. The trophy was a silver and gold service consisting of a pitcher, tray and six goblets.

Other prize winners were as follows:

First flight—Low net, Carl A. Young, Division of Standardization, Dallas; second, W. C. Taylor, Standard Oil Company of Louisiana, Shreveport; third, Charles Barton, Standard Seamless Tube Company, Ambridge, Pa.; fourth, Z. F. Harshton, Imperial Belting Company, Chicago.

Second flight—Low net, W. S. Nicoll, Midwest Exploration Company, Amarillo; second, A. E. Butts, A. O. Smith Corporation, Tulsa; third, R. A. Wilson, Guiberson Corporation, Dallas; fourth, Adrian Moore, Rycade Oil Corporation, Houston.

Third flight—Low net, F. O. Pryor, Dixie Oil Company, Shreveport; second, W. A. Trout, Emsco Derrick & Equipment Company, Los Angeles; third, G. C. Gester, Standard Oil Company, San Francisco; fourth, W. H. Thompson, Oil Well Supply Company, Pittsburgh.

Fourth flight—Low net, W. W. Scott, Humble Oil & Refining Company, Houston; second, D. R. Knowlton, Phillips Petroleum Company, Whittenburg, Texas; third, C. R. Weiss, Link Belt Company, Indianapolis; fourth, N. G. Bruce, Rubber Association of America, New York.

Texas Company on Trade For West Texas Tract

San Angelo, Texas. — Entrance of The Texas Company into West Texas in a big way with prospects of a trunk line outlet will follow the consummation of a deal pending early this week for the purchase of the Landreth Production Corporation's producing properties in Crane and Winkler Counties. The consideration involved promises to set a new record for trades in West Texas, since Landreth has in excess of three million barrels of oil in steel storage and an average production of 7400 barrels daily on its strip lease in the Church and Fields area. This strip lease is 400 feet wide and 3.8 miles long, and has 16 wells which are credited with having produced about 3,500,000 barrels of oil.

Landreth's Hendrick field properties are owned on a 50-50 basis with Roxana Petroleum Corporation but Landreth operates same. The latter properties have 240 acres in production, with considerable virgin leases, and on the last official production gauge the 11 wells were rated at 70,192 barrels daily potential.

Development and Production Methods in West Texas

By HAROLD VANCE

Presented before the Division of Development and Production Engineering of the American Petroleum Institute, Colorado Springs.

THE AREA commonly known as West Texas includes the Counties of Winkler, Ector, Midland, Howard, Mitchell, Glasscock, Reagan, Crockett, Upton, Crane, Pecos and Loving. These Counties, as well as an additional area to the north in Texas and New Mexico, lie in what has been commonly termed the Permian Basin. (See Figure 1.)

The Texas and Pacific and the Orient Railway, as well as two transcontinental highways, serve this area.

Regional Features

(See Figure 2)

A large portion of this area is characterized by the sparsity of vegetation. In general, the area is of uniform relief, with occasional ridges of Cretaceous sediment. Sand dunes and caliche cover 50 per cent. of the area. Rainfall is slight and not consistent from year to year. The temperature varies from 15° to 110° F. Rapid changes in temperature are common, with high winds and occasional hail storms during the spring months.

Water for domestic and commercial purposes is obtainable throughout the area, with the exception of portions of Crane and Upton Counties.

In general, the producing fields occur along the rim of an Old Permian basin in which the normal order of deposition of salts, due to evaporation of water, are present.

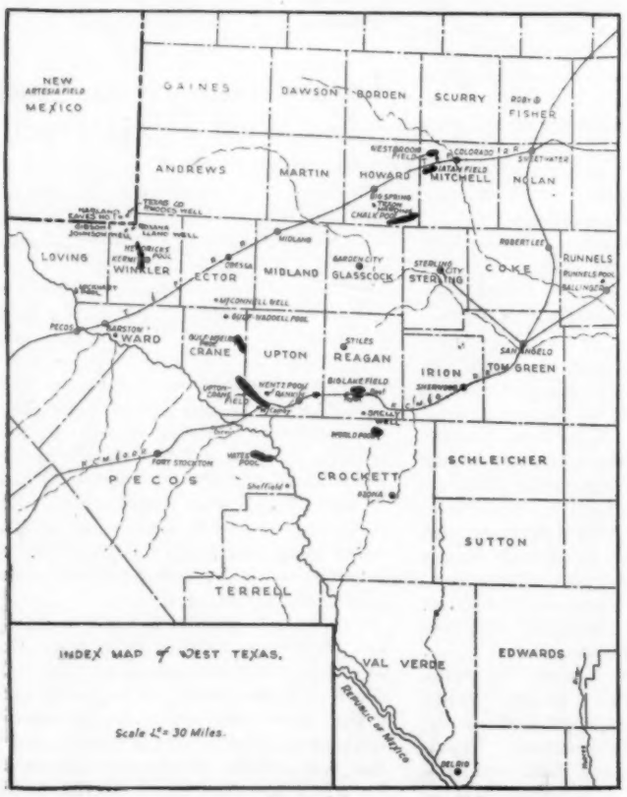


Figure 1

Bulletin 780-B of the Geological Survey discusses the West Texas area in relation to salt and potash. The salt beds are thinnest and are often entirely absent in the areas of structural highs. This absence of salt deposits is probably due to the irregular outlines of the basin, or to the presence of structural or topographical highs prior to the deposition of the salt and anhydrite. There appears to be no definite trend of the fields, but there is a close relationship to the rim of the basin. Surface structures in the Cretaceous are often misleading.

Production occurs in the big lime which lies below the Red Bed, salt and anhydrite deposits throughout the basin. The only exception to this, so far discovered, is the Chalk field in Howard County, in which the production occurs from sands in the Red Beds, as well as from the lime itself.

Producing Fields in West Texas

There are at the present seven fields in West Texas, with a production of over 3500 barrels each per day. These fields include the following in order of their present and prospective commercial importance:

(1) Hendrick Field, Winkler County.
(2) Yates Field, Pecos County.
(3) Gulf-McElroy or University Pool, Crane County.
(4) The Big Lake Field, Reagan County.
(5) Chalk or Roberts Field, Howard County.
(6) McCamey or Crane-Upton Field, Crane and Upton Counties.
(7) Westbrook, Mitchell County.

The Iatan Field in Mitchell County, World Pool in Crockett County, Gulf-Waddell Pool in Crane County, the Lockhart Pool in Loving County, the McConnell Pool in Ector County and Lea County of New Mexico, are of minor importance at the present time, although some of these fields give promise of developing considerable production.

Area Yet to Be "Wildcatted"

Twelve fields of major and minor importance have been discovered in a prospective area of 33,000 square miles. Eighty per cent. of these discoveries have been made in the last few years. Surface geology, sub-surface geology and torsion balance, seismograph and magnetometer have been used in locating fields already discovered.

Commercial Importance of West Texas Fields

Producing fields in West Texas today represent the country's largest known reserve of oil. The entire area represents the best prospective area in the United States.

The high sulphur content of the oil has been responsible for the lack of market and low prices, and has led to a decrease in drilling, thus preventing a number of fields from reaching their maximum production.

The known corrosive effect of the oil and gas delayed the building of storage. Concrete reservoirs are now being constructed, in addition to steel storage.

The lime production is characterized by gas carrying high percentages of hydrogen sulphide, and having low natural gas-oil ratio.

The Hendrick field, in Winkler County, is the only field in which a large amount of free gas, under high

pressure, is available. This gas represents a commercial possibility in that it could be used for domestic consumption with some precaution taken to eliminate leaks and fumes from burning. It also has a lower hydrogen-sulphide content than any gas so far discovered.

The details of this report will be confined to the most important fields in West Texas, with the exception of the Gulf-McElroy or University Field in Crane County, which was covered in a report given at the Fort Worth meeting in April, 1928.

Crane-Upton Field

The Crane-Upton, or McCamey, field was discovered in the early part of 1926 and the development was very rapid considering the low initial production of the wells drilled. This field marked the westward extension of production in West Texas and results of this discovery lead to increased wildcatting and the discovery of additional fields in West Texas.

The discovery well was drilled in Section 8, Block R, H. & T. C. Survey, Upton County. Development spread east, then northwest and southeast for a distance of 15 miles. The present productive area amounts to 8000 acres.

Sub-Surface Data

The structure in anticlinal and characterized by local highs with low saddles in which no commercial production occurs. The Independent area shows the most intense folding, and here wells have been drilled with an initial production of as much as 4000 barrels. The Lane Pool, near the Orient Railway righ-of-way, has a similar sub-surface conditions and has produced wells of high initial production. In these two areas the encroachment of water has accounted for rapid decline in production. The surface formation consists of lime or sand and for a depth of 600 feet to 800 feet the formation consists of sand stones and anhydrite, with water occasionally present in the more porous sandstone. The formation below the anhydrite and sand stone consists of salt with some red shale and anhydrite. In a few instances small pockets of water have been found in the salt section. Below the salt section there is 700 feet to 900 feet of anhydrite with some sandy shale and a small amount of salt and dolomite. Below this anhydrite section is a brown dolomite stratum which varies in thickness from 0 to 40 feet. Under the brown dolomite is 100 feet of fine silty sand stone. Below this sand stone measure is the big lime which contains some anhydrite and Bentonite. Production occurs in the big lime at depth ranging from 0 to 120 feet. The production within the lime itself may be divided into two zones; one occurring from 0 to 40 feet and the other from 80 feet to 120 feet in the lime. The oil in the upper zone has a gravity of 31° A. P. I. Oil from the lower zone averages 28° A. P. I. gravity. Wells

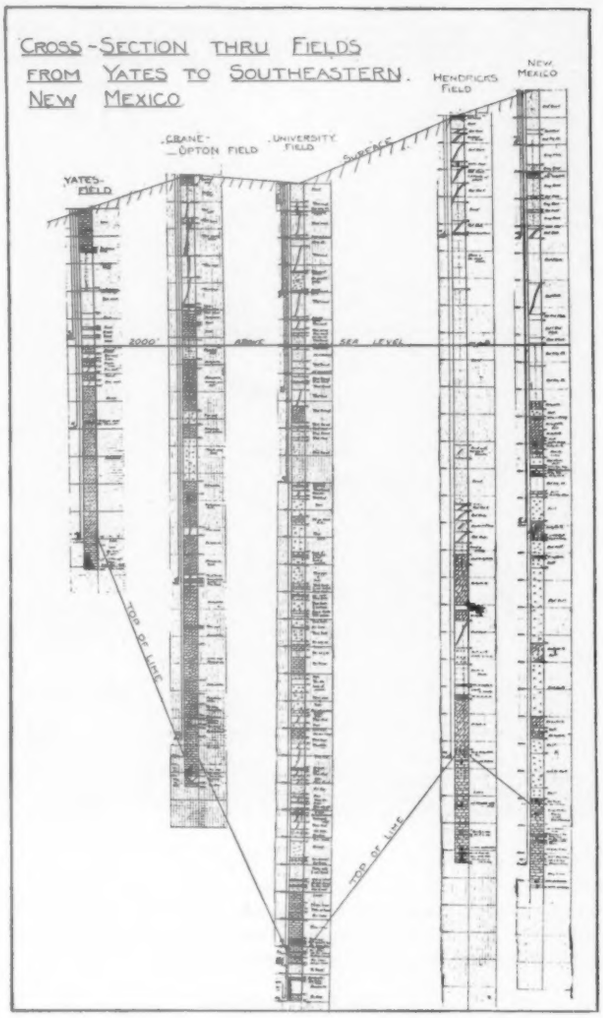


Figure 2

completed in the upper zone are characterized by low initial productions and gradual declines, while wells in the lower zone have higher initial productions and a rapid decline caused by the encroachment of water. Both zones show wide variations in porosity, which accounts for great difference in initial production. No free gas has been encountered in either zone and the production is characterized by low gas-oil ratios. The initial fluid level in

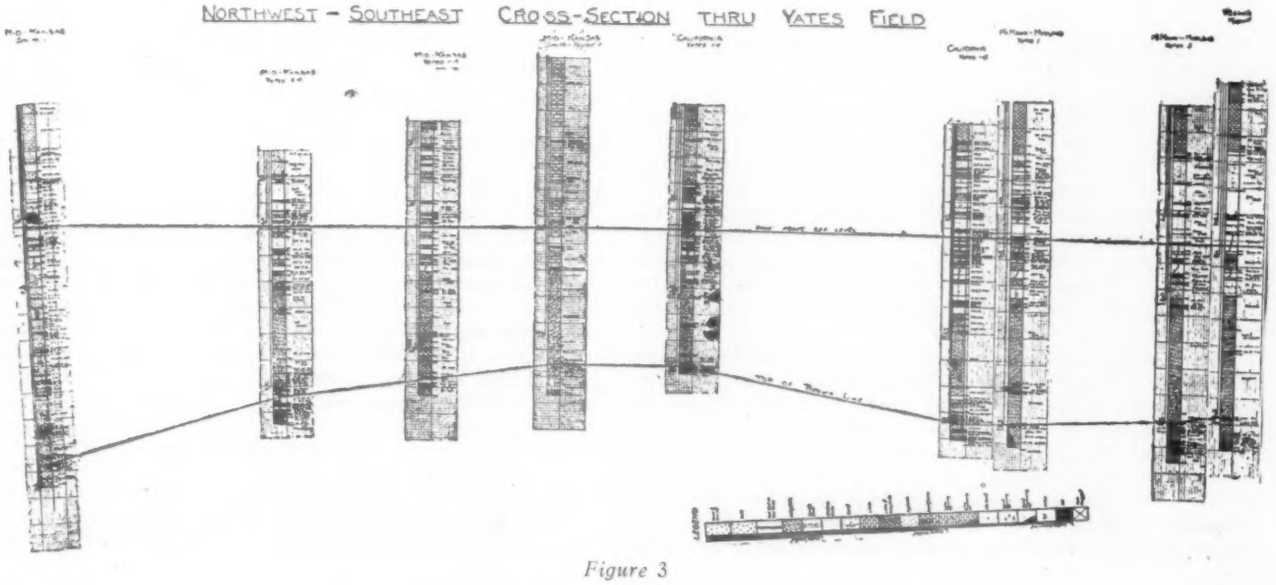


Figure 3

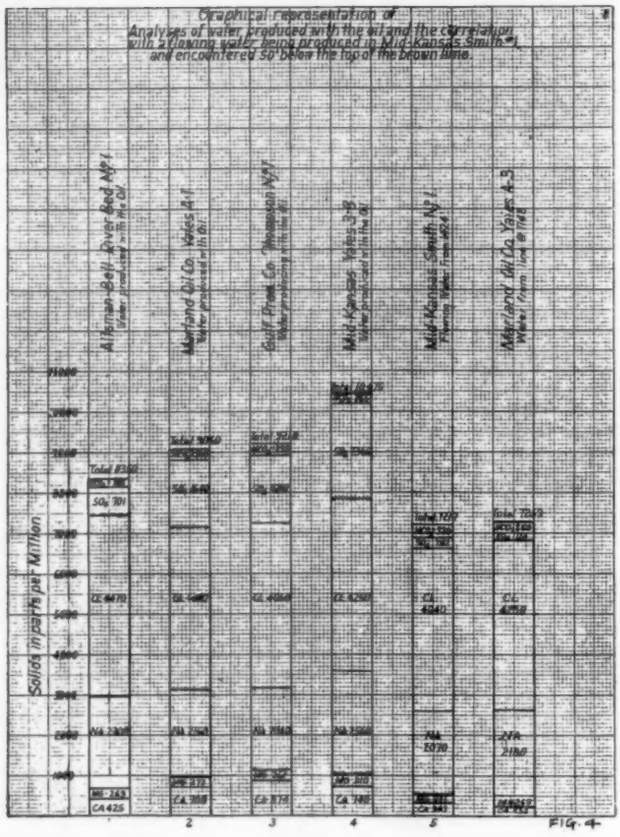

Graphical representation of
Analyses of water produced with the oil and the correlation
with a flowing water being produced in Mid-Kansas Smith #1
and encountered 50' below the top of the brown lime.
Solids in parts per Million
Allsman Bell - River Bed No 1
Water produced with no Oil
Maitland Oil Co. Yates A-1
Water produced with no Oil
Gulf Prod. Co. Thompson No 1
Water produced with no Oil
Mid-Kansas Yates 3-B
Water produced with no Oil
Mid-Kansas Smith No 1
Flowing Water from Lime
Maitland Oil Co. Yates A-3
Water from Lime @ 1148
2
3
4
5
FIG. 4

Figure 4

the upper zone was 1700 feet, with occasional flowing wells in more porous areas. The lower zone is characterized by high fluid levels, due to water pressure.

Drilling Methods

Cable tools have been used entirely for drilling in the Crane-Upton fields. The standard cable tool equipment has been generally used for drilling purposes, although some wells have been drilled with machines, and the average drilling time is 30 days. Wells vary in depth from 1900 to 2500 feet. The cost of drilling varies from $20,000.00 to $25,000.00. The lack of good water is responsible for the universal use of internal combustion engines for drilling purposes. Both oil and multiple cylinder gasoline engines have been used with much success. No wells have been drilled with either steam or electricity.

Casing Program

A 10-inch 40-pound, 8¼-inch 32-pound, 6⅝-inch 24-pound casing program has been used, although in certain cases 8¼-inch casing has been eliminated. It has been customary to set 10-inch casing just above the top of the salt, a string of eight-inch below the salt and the 6⅝-inch casing in the brown dolomite which occurs 100 feet above the top of the big lime. This program has been varied, as mentioned above, by setting the 10-inch above the top of the salt and the 6⅝-inch in the brown lime, thus eliminating the 8¼-inch string set through the salt formation. This latter method is entirely satisfactory in case no water is encountered from the top of the salt to the top of the brown lime.

The use of cement, in setting casing, has not been practiced, except in a few cases. This practice has been necessary on account of heavy shots used to increase the production, as the last string of casing is usually lifted as much as 500 feet before shooting.

Methods of Completing Wells

Wells, completed in the upper zone, are drilled to a predetermined depth and given a swabbing test, then shot and thoroughly cleaned out. Wells drilled to the lower zone usually flow when the lower zone in penetrated. These wells are immediately pinched in and allowed to flow under high back pressure in order to hold back the water.

Production Methods

Multiple pumping units are generally used on the small producers, while larger wells producing water are pumped on the beam. Two-inch tubing is used on the smaller wells and the 2½-inch and three-inch tubing used on the larger wells which produce water. The air lift has been tried and was successful on wells having high fluid levels and capable of producing large volumes of fluid. Wells of this character are wells which produce water, and care must be taken to eliminate the effect of corrosion. The use of air lift has been discontinued in favor of the pump. The bad gas and the corrosive character of the oil and water makes the lifting of oil very costly. Intermittent pumping is practiced on the smaller wells. However, no tests have been made to prove the advantage of this method of producing small wells. Where sufficient casing head gas is available, gas engines are used for power. If the horsepower rating of the gas engine is double that of the power requirements, very little trouble is experienced by using gas for fuel.

Treating Costs

Treating costs average from one cent to two cents per barrel. Chemical is generally used for breaking down the emulsion, although there are several electrical dehydraters in the field which are working satisfactorily. Heat is required in conjunction with either electrical or chemical methods during the colder months. Excelsior tanks in conjunction with chemical have also proven satisfactory.

Corrosion

The detrimental effects of corrosion are starting to show up in the Crane-Upton field. Tubing, rods and flow lines are being the most affected by corrosion. The bottoms of stock and storage tanks are also being slightly injured.

Production

The initial productions in the field range from 10 to 4000 barrels per day. The estimated ultimate production per acre for the entire field is 3500 barrels, based on the extensions of accumulative production curves, on the semi-logarithmic paper. Ultimate productions per acre should range from 300 to 20,000 barrels. Large drainage areas in certain wells account for the high recovery per acre.

Method of Increasing Production

Shooting has been the principal method of increasing production, with shots varying from 50 to 550 quarts of liquid or solidified nitroglycerine. Increases of as much as 300 per cent. have been noted. Clean-out work has not been as beneficial as might be expected toward increasing production. The air lift has increased production on some wells. Repressuring has been resorted to in a minor way, but has not been sufficiently applied to show any results.

Gas

Gas-oil ratios on pumping wells average 300 cubic feet to the barrel. Very few measurements have been made on gas-oil ratios on any flowing wells in the field. The gas itself carries five per cent. hydrogen sulphide and gasoline contents of as much as one and one-half gallons per 1000 cubic feet have been noted. The gas is used locally for fuel, but considerable care must be taken in its use for domestic purposes.

Yates Field

The discovery well in the Yates field was drilled by the Mid-Kansas Oil and Gas Company in Section 60, Block 1, I. & G. N. Railway Survey, Pecos County, and was completed on December 14, 1926, at 1004 feet, with an initial

production of 350 barrels per day. This well was later deepened and showed substantial increase in production. Development was slow in getting started, but with the completion of a few large wells development increased until the necessity of prorating the field was realized. After proration went into effect on October 1, 1927, drilling operation still continued; however, when the method of proration was placed on a productive acreage basis, drilling was confined to increasing the known productive acreage of each operator in the field.

On October 1, 1927, hourly gauges gave the field a production of 172,845 barrels per day. The known productive acreage is approximately 12,000 acres.

Sub-Surface Data

(See Figures 3 and 4)

The structure is anticlinal, and is composed of two domes, separated by a low saddle, across which production extends. Surface elevations in the field vary from 2150 feet to 2960 feet. The drilling starts in lime at the highest part topographically. Fresh water is encountered at depths ranging from 50 feet to 432 feet. A second water zone is located about 100 feet below the upper water zone and is separated from it by blue shale and lime. The third water zone is located about 160 feet below the second water and is separated from it by blue shale and lime. The fourth water zone is located about 260 feet below the third water zone and is separated from it by lime and anhydrite with some red shale. This fourth water zone is about 10 feet in thickness and carries sulphur water, which sometimes carries a show of oil. The formation below the fourth water zone and the top of the brown lime is chiefly anhydrite with some red beds and sand. On the flanks of the structure the percentage of sand and anhydrite is greater than on top of the structure. The top of the brown lime consists of brown dolomitic lime, underlain by about 30 feet of sand, sandy shale and anhydrite. At the base of this sandy zone is the gray lime series in which the oil and gas occur. Oil has been encountered above the top of the lime in a few instances—the lime has been penetrated as much as 230 feet for production. Differences in porosity have been responsible for wide differences in initial productions even in the case of off-set wells. Figure 4 shows the relationship between water produced with the oil, and known bottom and edge water. The bottom hole pressure of the oil zone has been measured in several wells and found to be 700 pounds per square inch.

Drilling Methods

The cable tool method of drilling has been universally used in the development of the Yates pool. Two attempts to drill with rotary have been made on wells located near the Pecos river bed, but some difficulty has been encountered in completing the wells. A substantial saving in casing would be made with the rotary method of drilling. Standard rigs and drilling machines, as well as spudders, have been used in drilling wells to completion. Steam is generally used for drilling purposes, although some oil and gasoline engines have been used.

Costs

Drilling depths range from 915 to 1725 feet. Most of the drilling is being done by contract, with prices ranging from $3.50 to $5.50 per foot. Drilling costs range from $7,500.00 to $18,000.00. Road building has increased the cost of a number of wells on account of the wide ranges in topography. Casing programs consist of either a 12½-inch 50-pound, 10-inch 40-pound, 8¼-inch 32 pound, or a 10-inch 40-pound, 8¼-inch 32-pound and 6⅝-inch 24-pound. The last string of casing is usually set on top of the lime or just above the top of the lime and cemented by the two plug method. Chemical is generally used to accelerate the setting of the cement.

Method of Completing Wells

Well head connections consist of a master gate with a cross above it, then a second gate and a control head.

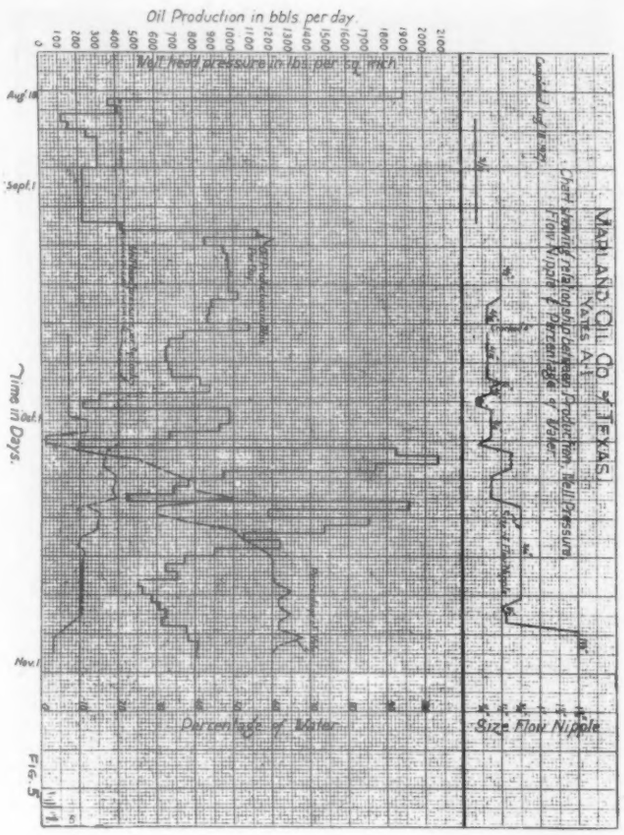

Oil Production in bbls per day
Well head pressure in lbs per sq inch
Aug 15
Sept 1
Nov 1
Time in Days
Percentage of Water
Size Flow Nipple
MAIDLAND OIL CO. of TEXAS
YATES A-1
Chart showing relationship between Production, Well Pressure, Flow Nipple & Percentage of Water
Fig. 5

Figure 5

Other wells are connected with only a master gate and control head. Wells connected in this manner are either produced through the connections used in drilling in, or the control head is removed and more suitable connections are installed.

Hourly gauges are often taken while drilling in, in order to determine the depth at which the greatest increase occurs.

The wells are usually drilled to a predetermined depth, dependent upon its location on structure and the amount of oil the well is capable of producing. It is important that each well be drilled to the same producing zone as its offset well. Porosity in the lime has produced small porosity structures which are more important for correlation purposes than the top of the lime, or penetrations in the lime.

Production Methods

All wells drilled in the field have come in as flowing wells. Flow pressures as high as 550 pounds have been noted. Closed-in pressures on some wells are the same as flow pressures, while producing through a one-half-inch or smaller choke. Separators have been used to take care of practically all of the production, although at present it would be possible to produce wells without separators, on account of the small production allowed, and low gas-oil ratios. All wells are allowed to flow through the casing. Flow lines vary in size from two-inch to 6⅝-inch and are often arranged so that the cross-sectional area of the flow lines will be as large as the cross-sectional area of the oil string. During proration, some operators have pinched their wells with either a gate or a flow nipple, allowing them to flow continuously for 24 hours. When correctly regulated, the amount of oil produced is practically constant from day to day. Other operators open their wells for a few hours each day, allowing them to produce the quota of production. Recording pressure gauges are used to some extent to record the flow or closed-in pressure. Wider use of these gauges, and the study of the periods of flow of offset wells, could be used as a method of

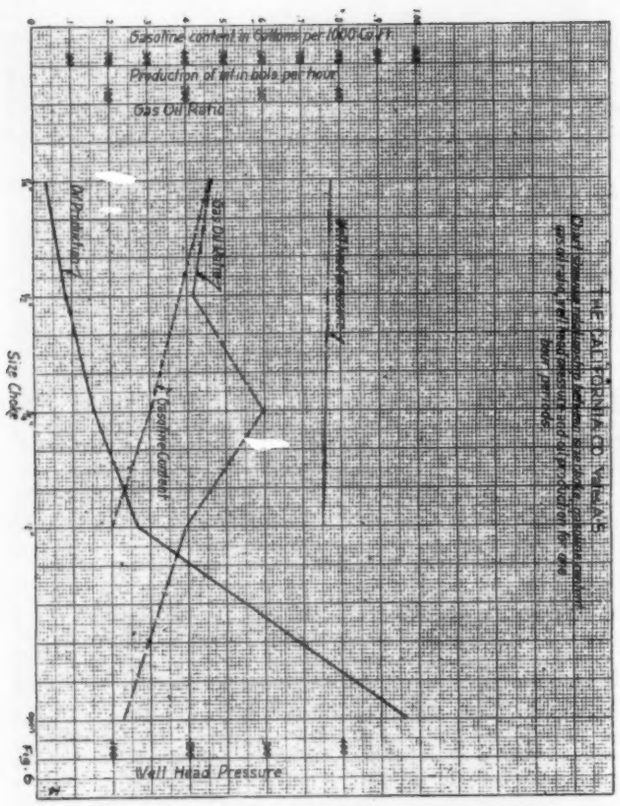


Figure 6

correlation. Some interesting data has already been obtained through their use.

The use of tubing on one small well steadied the flow, but did not materially increase production. Bottom hole pressures are sufficiently high to cause most wells to continue flowing, even though producing 100 per cent. water. Rapid encroachment of water in certain edge wells can be controlled by producing them under high back pressure. One edge well, which was producing 50 per cent. water, produced clean oil after being shut in for 30 days. Figure 5 is a typical illustration of the effect of back pressure on water encroachment. When water first appears, an increase in back pressure decreases the percentage of water, but after the percentage of water has reached 20 to 30 per cent. the effect of back pressure is not so noticeable and may even cause an increase in water for a short period.

Power Used

Electric power is now available in the field from two power companies, with a rate of about 1.8 cents per K. W. H. Some motor driven centrifugal oil pumps are in use in the field. Electricity is gradually displacing steam, oil and gas engines for power purposes.

Testing Costs

Chemical introduced through lubricators placed on the flow lines, readily breaks down the emulsion without the use of heat.

Treating costs by the chemical method range from one to 2½ cents per barrel. Electrical dehydrators have been tried in the field but as yet have not proven entirely satisfactory.

Corrosion

Corrosion will undoubtedly be a source of considerable trouble in the Yates field, due to the character of the oil, gas and water produced.

Production
(See Figure 6)

Initial productions range from 25 barrels per day to 100,000 barrels per day. The figures for initial production on the larger wells are based on hourly gauges. The average initial production per well for the field, based on hourly gauges, is 10,000 barrels. The total accumulative production for the field up to April 1st was 9,716,184 barrels. One operator in the field has produced slightly less than half of the total production. On account of the method of production, very little data on declines are available. It has been estimated that the ultimate recovery per acre will range from 40,000 to 50,000 barrels.

Methods of Increasing Production

Shooting has been used in few cases to increase production on very small wells. At present, methods of increasing production are not used on account of the proration. The air-gas lift could be used to an advantage on some wells in the field. Repressuring appears to be impracticable. The natural water drive, which is now in progress, under ideal conditions should lead to a high recovery of oil.

Gas

Free gas is rarely encountered above the oil zone. The gas-oil ratio averages about 350 cubic feet per barrel. Figure 6 shows the relationship between well head pressure, well production, gas-oil ratio, gasoline content and size choke. The gas-oil ratio curve on this chart shows the size of choke, which gives a maximum gas-oil ratio. This same characteristic was shown by other wells. Gasoline content of the gas ranges from .025 to 1.75 gallons per 1000 cubic feet.

Hendrick Field

The discovery well in the Hendrick field was drilled in November, 1926, by the Westbrook interests, in the south-

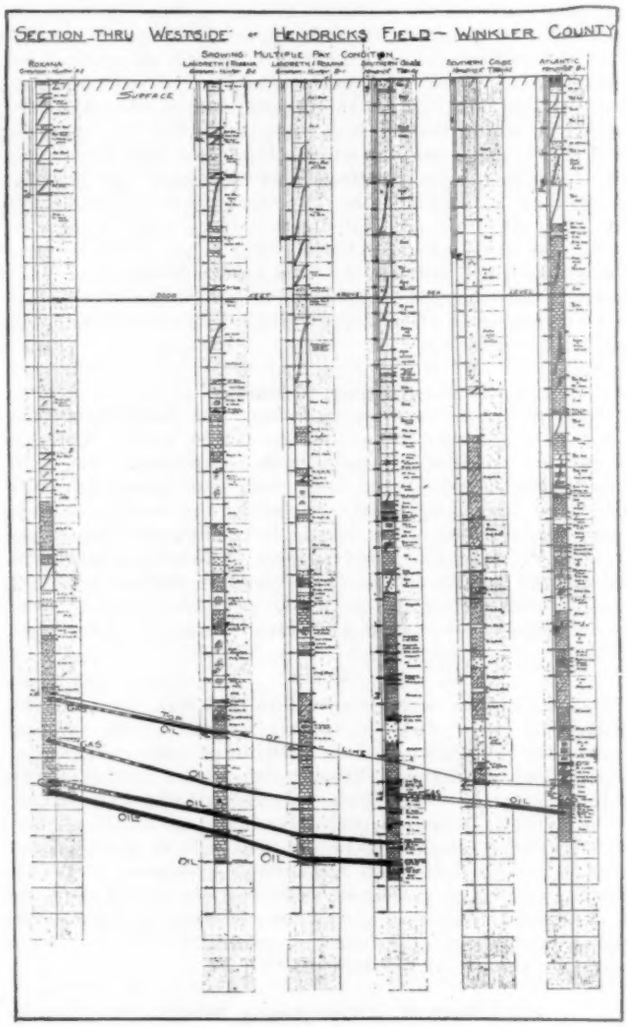


Figure 7

east quarter of Section 45, Block 5, Public School Land, Winkler County. This well was completed at 3032 feet, with an initial production of 420 barrels. Very little interest was shown in this discovery on account of the depths at which the oil was encountered, lack of transportation facilities, and the relativity low initial production. However, the completion of the Gulf Production Company's diagonal offset as a 5000 barrel producer stimulated interest in the area. Development has been rapid in the last six months and has extended the field to the east and north. On June 1, 1928, the field appears to have a proven area of 5000 acres, extending six miles north and south, and three miles east and west. The daily production has been as high as 322,000 barrels.

Rapid development of the field and high initial production of the individual wells have made the Hendrick field the most important in West Texas.

Production comes from the big lime, but differs somewhat from the Yates, McCamey and Gulf-McElroy fields in that oil is usually encountered below 300 feet in the big lime.

Complete information as to the character and contents of the formations above the big lime is not available, as most of the wells have been drilled with rotary from the surface to the top of the big lime. However, the log shown below gives an idea of the formations and their contents:

0— 350, sand, water sand and red shale.
350— 550, red rock.
550— 650, sand, water sand and shale.
650—1050, red sand and shale.
1050—1300, anhydrite, water mud, blue shale.
1300—1800, salt and anhydrite.
1800—2300, anhydrite, shale, streaks of lime.
2300—3000, lime, gas and oil.

Sub-surface contour maps, using the top of the big lime as a marker, reveal an anticlinal structure with a steep west and south dip and a flat area on top of the structure. The limits of the field have not been defined to the north and east, but there is evidence to show that the dip in those directions will be more gentle.

Water has been encountered in four separate sands above the top of the salt; the water encountered in a sand varying from 125 feet to 300 feet from the surface is used for domestic and development purpose. Water has also been encountered in the lime in wells drilled off the structure.

Oil and Gas Horizons

Four separate oil horizons have been recognized in the lime, with the first horizon at 300 feet, second horizon at 400 feet, third horizon at 500 feet and the fourth horizon at 600 feet. (See Figure 7.) These depths in the lime may vary as much as 25 feet either way. The 300 feet and 600 feet horizons have proven the most prolific. Water encroachment has been more troublesome on the lower horizons. All of these horizons may not be productive in all wells, and may be entirely absent or carry gas. Changes in porosity in the lime are responsible for the radical differences in the production of each well. Closure within a porous stratum in the lime has been responsible for a natural separation of the gas and oil within this porous zone. Certain wells will blow dry gas for a period and then gradually produce oil, showing that the well is near the gas-oil contact of this small structure formed by changes in porosity.

Gas usually occurs at different intervals from the top of the lime down to the 300 feet horizon. There are several instances in which gas has been found above the top of the lime and has caused very troublesome and expensive blowouts. Gas is sometimes found in the usual oil producing horizons in wells structurally high or on minor porosity highs in these oil zones.

Pressures

The closed-in pressure of gas wells averages 1350 pounds. The uniformity of pressures throughout the field

Figure 8
Bringing in rotary well after bailing down 400 feet.

is indicative of a pressure connection between the gas and oil zones. The connection between the oil and gas zones may be so minute that the gas will pass through, leaving the oil behind.

Drilling Methods

(See Figures 8, 9 and 10)

The discovery well was drilled to completion with cable tools. Present practice is to drill the wells to completion with rotary or drill to the top of the lime with rotary and complete the wells with cable tools.

In the big gas area, wells drilled to completion with the rotary have been more successful. A mud with good wall forming properties should be used in drilling through the salt measures. Rock bits are generally used after first string of casing is set.

The average drilling time with rotary is 55 days, as compared to 70 days by the combination method.

Drilling costs range from $45,000.00 to $65,000.00, with depths ranging from 2725 to 3050 feet.

It is believed that the rotary method of completing wells is just as successful as the cable tool method, and entails considerable saving of time and money. It also prevents excessive loss of gas.

Casing Program

The most accepted and widely used casing program at present is to set 12½-inch 50-pound casing in sand stone at depth ranging from 150 feet to 700 feet and cement to the surface, using accelerator in the last 200

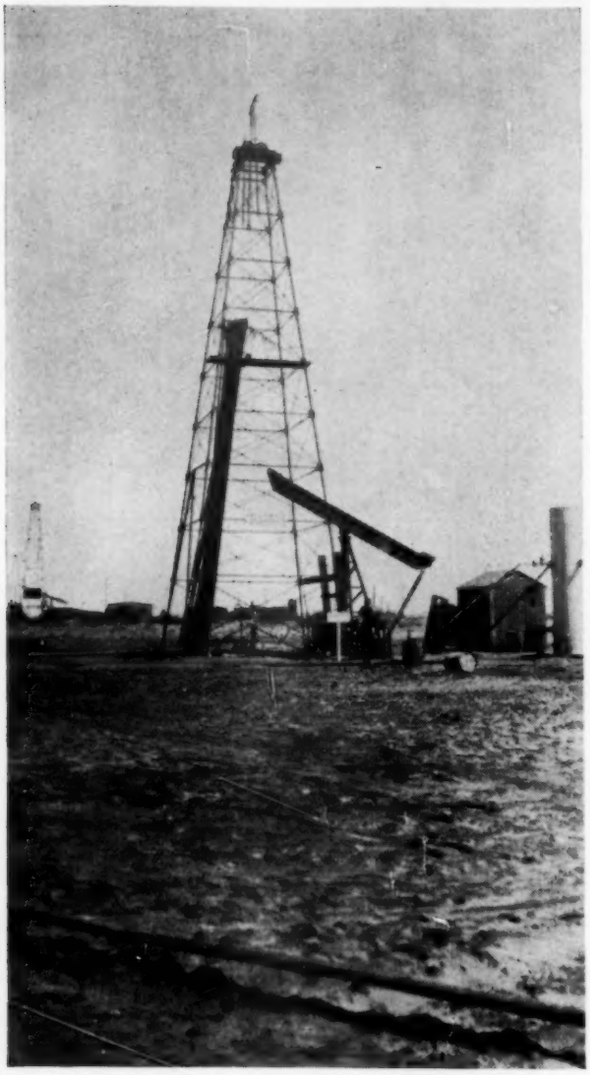


Figure 9
Gas lift well showing installation of pumping unit.

sacks of cement. A second string, which is usually 8¼-inch 36-pound seamless casing is set in hard anhydrite or lime at depths ranging from 2300 feet to 2650 feet and cemented to the shoe of the first string. In special cases 6⅝-inch casing is set above the main producing horizon. The 8¼-inch casing is usually tested by drilling out a few feet below the shoe and bailing the hole dry. There has been no trouble with cement not setting, except where there was known to be gas agitation.

Rotary Method of Completion

In the case of wells drilled to completion with the rotary, all well head connections are installed as soon as possible after the 8¼-inch casing is cemented. Casings are connected at the surface with a Regan head. Directly above the Regan head is a 3000 pound to 4000 pound master gate, then an 8¼-inch cross with either four-inch, six-inch or eight-inch outlets. In some cases the blowout preventor is placed directly above the cross with a drilling gate above the blowout preventor. In other cases the blowout preventor is on top. However, the drilling gate placed above the blowout preventor insures better protection in case the well should come in while drilling.

Coring to locate the oil measures is being more generally adopted.

A mixture of baroid and mud is usually used for drilling fluid while drilling in the lime. A drilling fluid with a gravity of 1.3 gives ample protection against blowouts. Weighing cans are often used in determining the weight of the mud. After the well has been drilled to its total depth, the blow-out preventor is usually removed and the fluid bailed down and the well allowed to come in. After the well is allowed to flow open from one-half to one hour, in order to clean itself, it is then turned into the flow lines. All common methods of pinching the wells in have been used, although the Venturi type of flow bean is becoming more popular.

Cable Tool Method of Completion

Cable tool completions are less common than during the earlier life of the field. The well head connections are practically the same as for rotary, with the exception of the blowout preventor and the use of a control head and ordinary oilsaver or the high pressure oilsaver. A large number of wells have been completed without the high pressure oilsaver. It is usually necessary to snub the tools in and out of the hole.

Heavy gas flows have prevented the completion to the oil zone of several wells drilled with cable tools. Outlets from the cross, used between gates on the oil string, must be larger than on rotary drilled holes, in order to decrease the flow pressure.

Most of the wells are completed as flowing wells and are allowed to flow through the oil string, which is either 6⅝-inch or 8¼-inch or A. P. I. nine-inch. A few edge wells are on the pump.

Individual pumping units have been installed at a number of flowing wells so that this equipment will be ready when the well stops flowing or production drops to a point where it will be economical to place the well on the pump. Electricity will be used to operate the pumping units.

The gas lift has been used on four wells in the field with good results, except that it cuts the oil in wells producing water. It is believed that the sub-surface conditions are such that the gas lift will prove the most economical method of production. At the present time the use of the gas lift will not be permitted by the railroad commission.

All flowing wells are equipped with separators. Flow lines are often laid so that the separator may be bypassed and the oil and gas diverted directly to the stock tanks. Excess gas escaping from the separator risers is often burned as a fire and health measure.

Power Used

Steam is most generally used for power on account of the abundant supply of gas and water. Electric power is also available in the field, with a rate of about 1.8 cents per K. W. H.

Oil Treating Methods

The encroachment of water makes an economical treating plant of utmost importance. The electrical and chemical methods of breaking down the emulsion are being

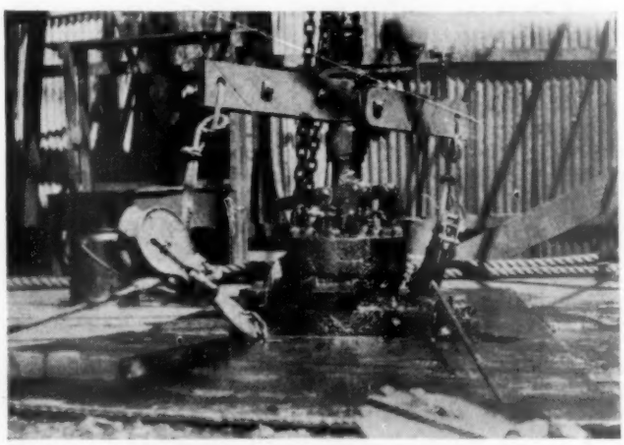


Figure 10
Installation of Craig high pressure oil saver with snubbing device.

used. In some wells it has been necessary to use both methods in order to clean the oil. This condition appears to be only temporary and with a decrease in gas agitation, the emulsion is more easily broken down. Heat is usually used in conjunction with either the electrical or chemical method. Chemical lubricators placed between the choke and the well give the best results, and in any case should be placed as close to the well as possible. Treating costs vary from 0.5 to 5 cents per barrel.

Corrosion

Corrosion is less detrimental in the Hendrick field than in other West Texas fields.

Production

Initial productions in the field vary from 300 to 85,000 barrels per day. The gas wells have gauged as much as 70,000,000 cubic feet per day.

In a broad way, initial production of both oil and gas are related to the structure, although porosity is the controlling factor.

There is not sufficient production data in the field to be able to place a very reliable estimate on recovery, although it appears from information at hand that the ultimate recovery per acre will be from 20,000 to 30,000 barrels. Some leases in the field have already produced over 30,000 barrels to the acre.

The encroachment of water does not affect the production as rapidly as would be expected. If properly controlled, the water encroachment will lead to increased recovery.

Methods of Increasing Production

In the Hendrick field shooting has been used to increase production on the very small wells. This was a case of increasing the production or abandoning them. All the wells so far shot have responded satisfactorily, showing an increase of 50 to 500 per cent. over the production before the shot.

An increase in production was shown with the gas lift.

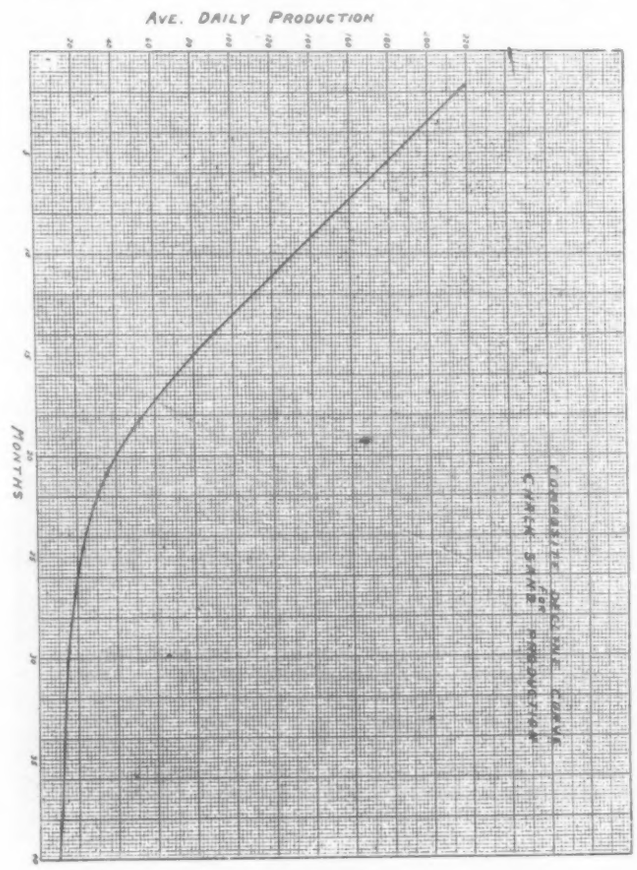


Figure 12

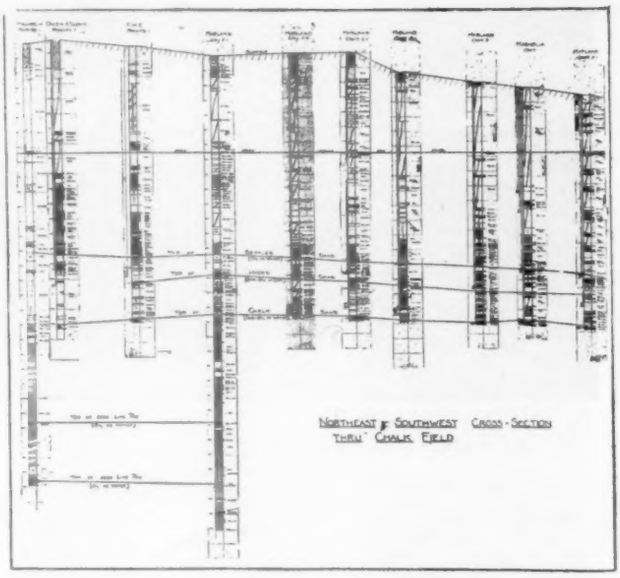


Figure 11

The use of tubing in wells producing water has increased the production.

Re-arrangement of flow lines and separators to decrease back pressure on wells producing water has been beneficial. Some wells have doubled in production when separators were placed in derrick.

Gas

The Hendrick field is characterized by a large amount of available gas.

The natural gas-oil ratio from dissolved gas alone, averages 400 cubic feet per barrel. In the case of wells having upper gas, which is being produced with the oil, the producing gas-oil ratio may run 30,000 cubic feet per barrel.

The volume of oil which the well is capable of producing controls the producing gas-oil ratio in wells which have upper gas.

While one well was producing 50,000,000 cubic feet of dry gas, it started to produce oil and caused the volume to drop to 11,000,000 cubic feet, showing a gas-oil raito of 990. A number of other wells in the field have shown this same characteristic.

The gasoline content of the gas produced with the oil ranges from .25 to 1.25 gallons per 1000 cubic feet.

Chalk or Roberts Field

The Chalk or Roberts field was discovered in the fall of 1925. However, little progress was shown until the spring of 1927, when a drilling campaign developed enough of the field to give some idea of its probable trend and extent. This rapid development stopped when the drop in the price of oil came, and since that time, drilling has been confined to locating the extent of the field, and exploring the lime section. The Roberts or 2900 feet lime horizon was discovered in the fall of 1927, and a number of wells have since been drilled to this horizon.

It appears that the productive acreage will be at least 7500 acres.

Sub-Surface Data

(See Figure 11)

The Chalk or Roberts field, in Howard County, has five producing horizons, one of which is of minor commercial importance.. (See cross-section.)

The first or Settles sand is encountered at depths ranging from 1200 feet to 1300 feet and varies from 20 feet to 40 feet in thickness. The Fred Heyer sand is encountered 150 feet below the Settles sand and varies in thickness from 10 feet to 30 feet, and contains either oil or gas, or is dry.

About 250 feet below the Heyer sand is the Chalk sand, which at the present time is the chief producing horizon

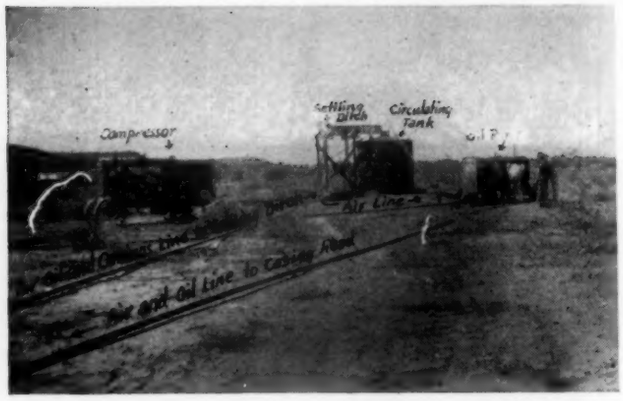


Figure 13
Method of connecting up clean-out equipment.

in the old Chalk field area. This is a fine sand, which varies in thickness from 11 to 20 feet, and shows considerable variation in the amount of cementing material.

About 750 feet below the Chalk sand and in the Big Lime is the so-called 2500-foot lime horizon, which was first discovered in Maryland Clay E-1. This particular horizon is being exploited and the thickness has been found to be from 10 feet to 40 feet. This is typical lime production and shows the characteristic variation in porosity typical of other West Texas lime fields.

About 400 feet below the 2500 foot horizon is the Dora Roberts horizon. This horizon is now being exploited and the thickness has been found to be as much as 30 feet. It is characterized by flowing wells, with an initial production of about 3000 barrels. The location of the Dora Roberts horizon is more uniform than the 2500 foot horizon.

The oil from the Settles sand is about 29 gravity and contains 0.75 per cent. sulphur. Very little gas accompanies the oil, and water is encountered down the flanks of the structure.

The oil from the Heyer sand is about 30 gravity and contains less sulphur. The oil produced from this horizon is of no commercial importance.

The gravity of the oil produced from the Chalk sand varies from 29° to 33° A. P. I. In the higher part of the structure, free gas is encountered, with oil down the flanks, and salt water still lower on the structure. This oil contains .09 per cent. sulphur.

The oil produced from the 2500-foot pay and the Dora Roberts pay varies from 27 to 30 gravity. This oil contains from two to 2.3 per cent. sulphur. Very little gas accompanies the oil from either of these horizons.

In some areas, only one horizon is productive; while in others, as much as three horizons are productive.

These variations in productive areas of the different producing formations is due to the presence of several minor highs on a large major fold, extending through the field for a distance of 10 miles.

Drilling Methods

There is no uniform method of drilling or completing wells in the Chalk field. Rotary and cable tools have been used in drilling wells to completion to the Chalk sand and to the Roberts lime production. One of the large operators in the field drills all wells to the Chalk sand with drilling machine, and drills to the Roberts pay with standard sable tools. One operator drills all Chalk sand wells to within 20 feet of the top of the sand with rotary, where he cements the casing and then completes the well with a drilling machine. The rotary has been used in completing several wells in the Chalk sand. Drilling machines have been used to drill to the 1200 feet or Settles sand. Wells drilled to the Chalk sand are completed and ready for the pump in 30 days when drilled by the combination rotary and cable tool method, while at least 55 days are required to complete a well with cable tools only. This includes shooting and cleaning out after the shot.

All wells, with the exception of two, have been drilled to the Dora Roberts pay with cable tools. It requires 75 days to drill with cable tools and 55 days to drill with rotary.

There is a considerable saving in casing and drilling lines when the rotary is used to drill to the Roberts horizon. The oil from the 2500-foot horizon is very destructive to drilling lines and is not easily cased off.

Drilling Costs

The cost of drilling to the Settles sand varies from $7000 to $9000.

Wells drilled to the Chalk sand by the combination rotary-cable tool method cost from $10,000 to $12,000, equipped to pump. The cost of drilling with cable tools ranges from $15,000 to $18,000.

The higher drilling cost for cable tools is due to the extra amount of casing needed.

The cost of drilling to the Roberts horizon varies from $30,000 to $40,000.

Casing Program

In drilling wells to the Chalk sand with cable tools a 12½-inch 50-pound, 10-inch 40-pound, 8¼-inch 32 pound and 6⅝-inch 26-pound casing program is used. These different strings are not set at any uniform stratigraphic level, although it is usually necessary to set a string of casing below each water sand, as water causes the Red Bed formation to cave. The last string of casing is set from 50 feet to as much as 300 feet above the top of the Chalk sand which, in some cases, allows the Heyer and Chalk sands to be produced together. In some wells it is pos-

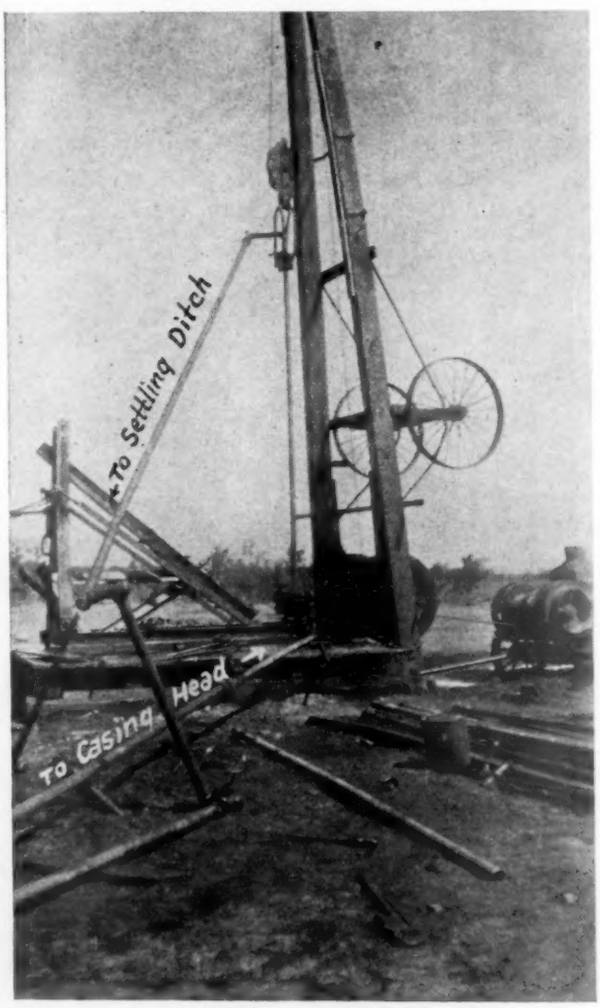


Figure 14
Well head connections.

sible to set the 8¼-inch casing where the 6⅝-inch casing is usually set. When the last string of casing is set, it is sometimes possible to pull either the 10-inch or 12½-inch casing. Cement is rarely used in setting casing in cable tool holes.

In drilling with the rotary, a few joints of 12½-inch or 10-inch are set and cemented at the surface. A second string, which is usually 6⅝-inch, is set at depths varying from 20 feet to 250 feet above the Chalk sand. However, all operators are setting casing much closer to the top of the sand than heretofore. It is general practice to cement the last string of casing set in rotary drilled wells with 65 sacks of cement. This is sufficient to cover the Heyer sand and the Settles or 1200-foot sand when the 6⅝-inch casing is cemented in a nine-inch hole just above the top of the Chalk sand. No difficulty has been encountered in running pipe to bottom in rotary drilled holes.

In drilling wells to the Dora Roberts pay it is customary to cement the 6⅝-inch casing below a 50-foot water-bearing stratum which is found 100 feet above the producing horizon. Sufficient cement is used to cover the 2500-foot pay.

In drilling with cable tools to the Dora Roberts pay, 15½-inch casing is set below the surface water and each additional string is carried as far as possible, so that the 2500-foot lime horizon and a water sand, which is encountered just above the Roberts horizon, may be cased off with the 6⅝-inch casing. Sufficient cement is used to protect the oil and water stratum.

Cementing

The two plug method of cement is generally used in all cementing operations, although the dump bailer method is used in special cases. Gasoline and steam driven cementing outfits are available. Chemical is usually used with the entire mix of cement.

It is general practice to let the cement set four days before testing the casing. A test for water shut-off is made after drilling out the plug. There has been little difficulty in securing a water shut-off where casing is cemented.

Methods of Completing Wells

Wells drilled to the Chalk sand are, in general, completed with cable tools. The penetration into the sand is determined by the position of the well on the structure. In the case of wells high on the structure, a three-foot to five-foot pocket is often drilled below the sand, while wells low structurally and near the edge water line are drilled eight to 12 feet in the sand. However, some operators drill through the sand regardless of structural position, and as a result, start treating the oil soon after completion of the well.

A few Chalk sand wells flow, but in general the fluid level rises from 800 feet to 1500 feet in the hole, depending upon the structural, sand and pressure conditions. After the sand has been drilled and it has been decided to shoot, the well is swabbed for a test, then shot and cleaned out.

All wells completed in the Roberts horizon flow naturally or by agitation. At the present, all the Roberts production is shut in.

Production Methods

All wells, which do not flow, are either swabbed or placed on the pump. However, swabbing is not used as a permanent method of production.

The Chalk sand wells are the most difficult to keep pumping. The fine sand, which is produced with the oil, cuts the cups, causing a large number of pulling jobs. This difficulty has been partially overcome by frequent clean-out operations; the use of plunger pumps, and the maintenance of a high pumping fluid level.

The band wheel power is used to pump most Chalk sand wells, although a few of the newer individual pumping units are in use. The character of the topography,

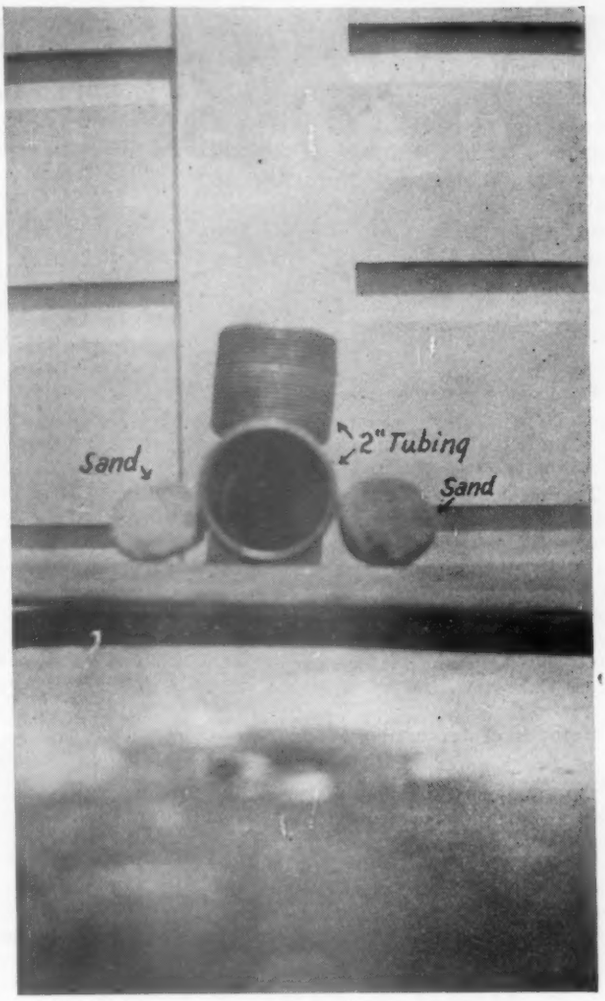


Figure 15
Showing size of particles removed through two-inch tubing.

in certain sections of the field, makes the individual pumping unit almost a necessity.

Gas engines and electric motors are used to drive the powers and individual pumping units. There is sufficient gas throughout the field for fuel. Electric power is available at 1.7 cents per K. W. H.

Treating Costs

Treating costs vary from one-fourth to two cents per barrel. Chemicals and heat are the only methods used to break down the emulsion. The chemical is introduced into the lead line through force feed pumps, operated by the pump jacks.

During the summer months, it is not necessary to use chemicals. The Chalk sand oil contains considerable paraffin, which settles out during cold weather and helps to hold the water particles in suspension. One operator has installed thermosphyon heaters which entirely eliminate the use of chemicals.

The oil from the 2500-foot and Roberts horizon is known to have corrosive properties.

Production

(See Figure 12)

Initial production from the Settle or 1200-foot sand ranges from 30 to 650 barrels per day.

Wells in the Heyer sand have averaged nine barrels per day.

Chalk sand wells have an initial production ranging from 50 to 225 barrels per day.

The initial production of wells in the 2500 horizon range from 20 to 2400 barrels per day. The Roberts horizon has

yielded wells ranging from 20 to 4200 barrels per day, with an average initial of 2800 barrels.

Production records over a period of two years are available on the Chalk sand production. Ultimate production per acre should range from 3000 to 20,000 barrels. The higher figure is an exceptional case and applied to certain isolated wells having the advantage of a large drainage area. The lower figure is characteristic of a drilled up area in which the thickness of the sand was 11 feet.

Production records from the other producing horizons are so meager that it is impossible to make any estimate of ultimate production.

The results of close spacing, the advantage of rapid completion, effect of new wells on the production of offset wells, the effect of initial pressure on production, and the effect of back pressure and reduction of gas-oil ratios, make the Chalk field and the Chalk sand production a particularly interesting study.

Methods of Increasing Production

(See Figures 13, 14 and 15)

Shooting has been the principle method of increasing production. All Chalk sand wells are shot except those in which the sand is unconsolidated. Shots vary in size from 10 to 60 quarts of solidified or liquid nitro glycerine. The best results have been obtained by using a 3½-inch shell of sufficient length to cover the sand to be shot, and loading the hole with 200 feet of oil. Increases in production of as much as 400 per cent. have been noted.

Cleaning out operations are necessary for the maintenance of high operating effiniency and production. A cheap method of cleaning out is now being used by one operator in the field. This is a combination of gas circulation method. A mixture of oil and gas is injected between the tubing and casing and allowed to pass down to a special shoe on the end of the tubing. The tubing is gradually lowered into the cavings. The mixture of oil and gas picks up the cavings, and carries them to the surface through the tubing. The cavings are dropped out in a setting ditch and the oil recirculated. This method has decreased the cost of clean out 65 per cent. and has made it possible to shoot, clean out and have a well back on production in four days.

Repressuring has been practiced on one 80-acre lease for a period of six months. Wet gas is returned to the sand through an in-put well in the center of the lease. Efforts have been directed toward the maintenance of pressure rather than the increase of production, because this lease is entirely surrounded by property controlled by another operator. The Chalk sand is well suited for repressuring and unit operation of a repressuring plant would be advantageous to all operators in the field.

The air or gas lift has not been used, although a number of wells in the Settles sand, 2500-foot horizon and Roberts horizon are well suited for this method of production.

Gas-Oil Ratio

The natural gas-oil ratio from the Chalk sand ranges from 60 to 20,000 cubic feet per barrel, with an average of 550 cubic feet. Considerable work has been done on the control of gas-oil ratios in pumping wells. It has been found that the ratio is more satisfactorily controlled in certain wells by holding back pressure at the casing head, instead of increasing the pumping fluid level. Production curves have shown the advantages of operating under a lower gas-oil ratio.

Gasoline contents range from .25 to two gallons per thousand cubic feet. One plant in the field is now extracting natural gas from the Chalk sand gas.

Standardization Work Turns to Field Application

(Continued from page 27)

form for further consideration at the annual meeting.

The committee also rescinded its action specifying a so-called plain end pull rod as A. P. I. standard with the result that the upset or reinformed pulley rod is now the only Standard Pulley Rod. Specifications on Bore Keyways and tolerances in pulleys as well as shaft dimensions for use with standard A. P. I. counter shaft assemblies were also ratified. Standard rating test forms for single and multiple cylinder gas engines and electric motors were adopted in tentative form and will be brought up for final ratification at the annual meeting .

Tentative specifications previously submitted by the Special Committee on the Standardization of Rotary Drilling Equipment on standard connections for swivel goose necks were adopted as final at the meeting here. Tentative specifications on 8⅝-inch drill pipe were accepted with the recommendation that these specifications be circulated to the industry for comment and study before their final approval at the annual meeting in december.

Agreement was reached with the Rig and Derrick Committee and specifications of this committee were finally adopted.

Recommendations from the California district for 6⅝-inch and 5 9-16-inch sizes of standoff of drill pipe in tool joints at hand tight bit were accepted.

Sessions of the various committees were well attended and many production men, field superintendents and engineers were present as a result of the combination program offered at the meeting through the additional two days devoted to the Division of Development and Production Engineering.

Get-Together Dinner Held

Tulsa. — Reiter-Foster Oil Corporation sounded the keynote of friendly co-operation serving to keep the oil industry above board when this organization was host Monday night to more than 250 company and department heads at a get-together dinner at the Tulsa club.

Every operating concern in the Mid-Continent was represented at the affair and many guests from the East and West Coast were on hand to "carry on" in the goodfellowship move now under way to defy depressed conditions. More than 100 letters and telegrams expressing regret at being being unable to attend were received by Paul Ache, president, showing the widespread interest manifested in the good will movement.

Judge Nathan A. Gibson acted as toastmaster in the absence of E. H. Moore, president of the Independent Oil and Gas Company, who had been selected. Following a five-course dinner, James A. Veasey, general counsel for the Carter Oil Company, in a short talk commended Reiter-Foster's attitude in promoting the get-acquainted move launched by T. B. Slick early in the year. He urged that a world wide move of this kind grow out of the territorial spirit that has been created in Tulsa, naming the need of coherence among all producers rather than just regional groups.

Todd M. Pettigrew, of Pettigrew & Meyer, New York financiers, denied the industry being a game and told of the steady, permanent income, even with the smallest concerns that is serving to bring ultimate success.

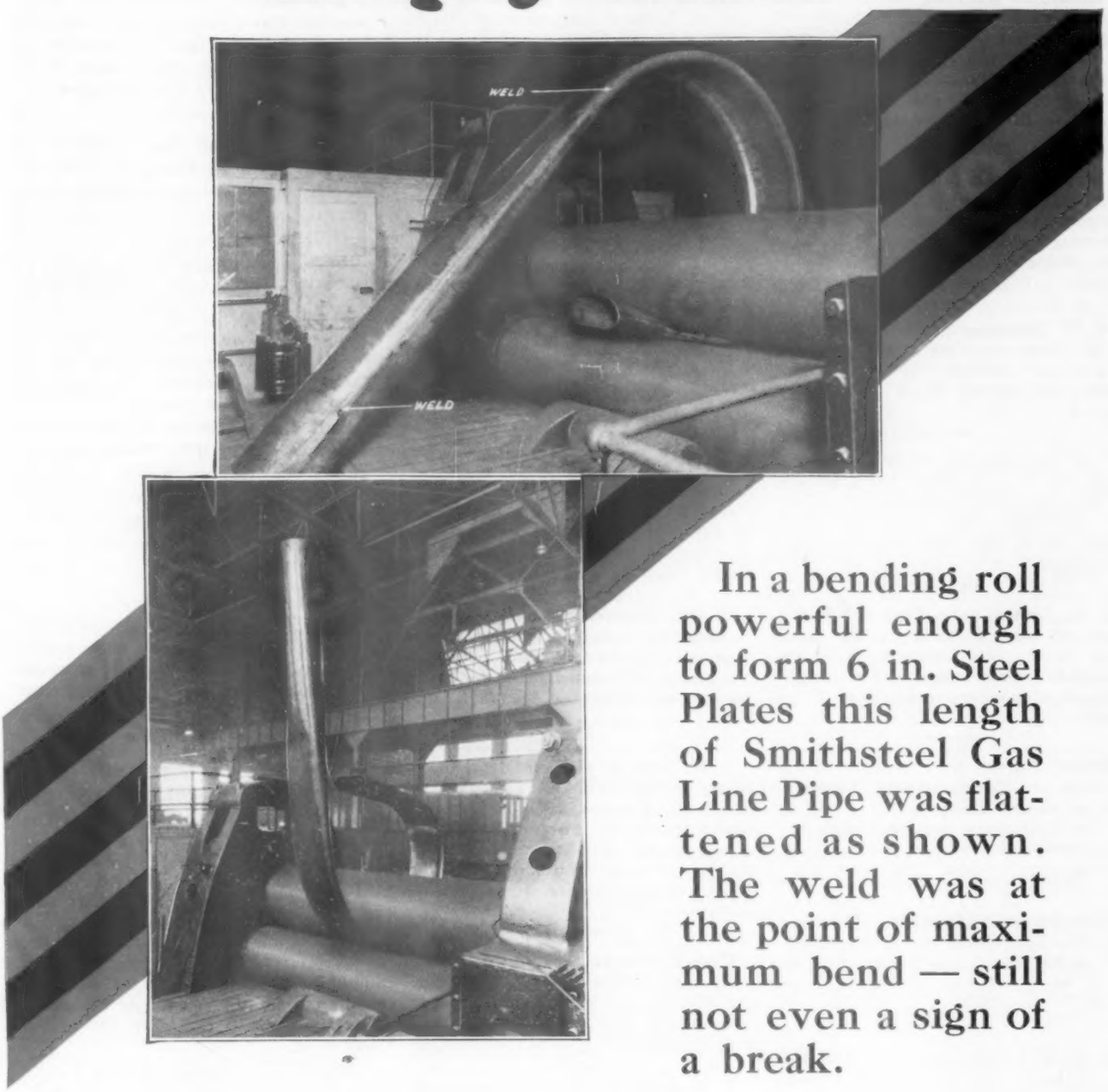
A well founded operating plan, capable of being changed to meet varying conditions, is making the small producing organizations successful today, he explained.

Fred Capshaw, chairman of the Oklahoma Corporation Commission; James G. Lyons, president of the Independent Oil Association of Oklahoma, and P. J. Hurley made short addresses to the gathering. Capshaw pledged the commission's co-operation with producers, provided the latter agreed among themselves.

Entertainment was provided by the University of Oklahoma orchestra and the Tulsa Quartette.

Ronald R. Ransom, who has been working as assistant to B. B. Hays, chief scout for Skelly Oil Company, Tulsa, for the past two years, has been transferred to the company's Amarillo, Texas, office. He has been succeeded in the Tulsa headquarters by Karl E. Nichols of Monte Vista, Colorado. Nichols' father, E. H. Nichols, is an independent oil producer.

Flattened Like an Empty Inner Tube



In a bending roll powerful enough to form 6 in. Steel Plates this length of Smithsteel Gas Line Pipe was flattened as shown. The weld was at the point of maximum bend — still not even a sign of a break.

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General Offices—Milwaukee, Wisconsin

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SMITHSTEEL GAS LINE PIPE

Say you saw it in The OIL WEEKLY

PERSONAL MENTION-MEN YOU KNOW

Ronald R. Ransom, formerly assistant to the chief scout of the Skelly Oil Company, has been transferred to Amarillo to take charge of scouting operations in the Panhandle District, succeeding Mr. Smith, who has been transferred to El Dorado, Ark.

W. M. Harper, formerly assistant to the superintendent of the Magnolia Petroleum Company at Earlsboro, Oklahoma, has been made chief clerk of the company's Westbrook, Texas office.

J. T. Devanney has been made assistant superintendent of the Magnolia Petroleum Company at Yale, Oklahoma, succeeding Clyde Brown, resigned.

Lee Cummins has been transferred from the West Central Texas district of the Magnolia Petroleum Company to the Shreveport, Louisiana, office where he is chief clerk to the superintendent.

J. D. Lemex, John Post and Byron Post, of the Oil Well Supply Company in the Mid-Continent, have returned to their offices after a sales conference of company officials in Pittsburgh.

Robert Harcus, field manager of the Burmah Oil Company with headquarters at Chauk, Burmah, was a visitor in the Gulf Coast section during the past week and is now in the Mid-Continent.

Jack Burden and Waldo (Mickey) Sheldon, comprising the firm of Sheldon & Burden of New York and Tampico, were visitors in Houston last week.

C. B. McKinney and F. Y. Hutcheson, general manager and chief engineer, respectively, of the Houston Pipe Line Company, and W. W. Blocker, assistant to the president of the Houston Oil Company of Texas, left Houston recently in an airplane bound for Southwest Texas and the Rio Grande border, and expected to visit Nuevo Laredo before returning.

A. H. "Pop" Russell, assistant cashier and paymaster for the Sun Oil Company, Dallas, has been transferred to headquarters at Philadelphia. "Pop" is a veteran with the Sun Oil Company, and has been playing "ghost" to the employes of the Dallas office since it was established.

G. A. Thompson, purchasing agent of the Empire Companies at Bartlesville, is in the East on a business trip.

L. C. Fay manager of the Dallas office of the Byron Jackson Pump Manufacturing Company, visited in Tulsa, recently.

H. W. Richards, representative of the Mine Safety Appliance Company in St. Louis, was in Tulsa.

Karl A. Alexander, of the Aluminum Company of Americ a's Kansas City office, has been in Tulsa in the interest of the company.

Dave Sands, southwestern representative of the Hewitt Rubber Company, has gone to the headquarters office at Buffalo, N. Y., on a business trip.

George C. Pohler, purchasing agent of the Mid-Continent Petroleum Corporation, is making a business trip to Louisville, Ky.

C. H. Meyers, formerly with the Continental Supply Company in the pipe sales department at St. Louis, has been made sales manager of the organization, succeeding H. L. Nolan, resigned.

J. H. Jenkins, vice-president and in charge of operations in Texas for the Tidal Oil Company, has returned to headquarters at Fort Worth after spending the past three months in making an inspection tour and study of the crude production situation in the Venezuelan fields.

Dave C. Stewart, vice-president Magnolia Pipe Line Company, Dallas, departed early this week, accompanied by his wife, for a vacation at Mt. Clemens, Michigan.

T. E. Swigart, chief petroleum engineer for the Shell Company of California, is spending his vacation in the Rocky Mountains. He read a paper before the A. P. I. Standardization Conference at Colorado Springs June 15.

J. A. Talbot, president of the Richfield Oil Company, has returned to Los Angeles after an extended business trip to New York. Mr. Talbot returned in the company's new tri-motored Fokker plane.

George Donnelly, oil operator of Ft. Worth, Texas, and an executive of the Eastland Oil Company, is touring California fields.

J. C. Axelson, president of the Axelson Machine Company, and Clyde Ellwood, sales manager, are making an extended business trip through Pennsylvania and other Eastern States.

Samuel Marshall has resigned as geologist with the George F. Getty interests and will engage in private practice in Los Angeles.

Kenneth C. Sclater has succeeded E. O. Bennett as chief petroleum engineer for Marland Production Company, Ponca City, following the appointment of Mr. Bennett recently as director of the Marland Institute. The institute, serving Marland employes in vocational training, instructed more than 1100 men during 1927. Additional employes are taking up this industrial training as they desire. Work of completing the institute is practically completed, and it will be open for the coming year this fall.

Earle Trager, formerly geologist for Marland Oil Company, is chief geologist for Skelly Oil Company, succeeding Frank C. Greene, resigned last spring to go with Roxana as geologist in the research department.

Shreveport, La.—George Belchic and Chas. G. Laskey of the Oil Fields Gas Company, with headquarters here, have awarded contracts for the construction of more than 500 miles of 16, 12 and eight-inch gas lines to transport natural gas from the Monroe gas district at a point near Alto, to Franklin, Lafayette, Lake Charles and intermediate points. More than 200 miles of 16-inch pipe will be laid on the north end of the system coming out of the gas field.

Belchic and Laskey plan to handle up to 50,000,000 cubic feet of gas daily through this new system.

Taft, Calif.—Leases formerly looked upon as of little value are changing hands at good prices in the semi-proven area near the Republic Petroleum and Chanslor-Canfield Midway's recent deep completions on Section 8-32-23. Many of the leases have long been known to be productive in the shallow sand, but production in the average well has been negligible. Half a dozen large companies are considering blocks of acreage within a radius of three miles of the only deep wells yet completed.

Hendrick Prorated Output Increased To 175,000 Barrels Daily

Gauge for second half of June reveals potential daily more than million barrels; two more pipe lines ready for service

By H. H. KING
Staff Representative

FORT WORTH, Texas. — The estimated daily potential production of the Hendrick field, Winkler County, passed the one million barrel mark when the official proration gauges were taken last week by Umpire Harold Pardee to determine the allowable production for each 40-acre unit during the 15-day period starting 7 a. m. June 16. These figures are considerably in excess of the amount that the field is capable of producing in a given 24-hour period with all wells opened, or partially relieved of back pressure, since gauges of wells represent only an hour or two open flow.

An increase of 25,000 barrels daily in allowable production was given the field at the start of this new period, thus making the maximum production of the field 175,000 barrels daily until further notice. This boost in daily production resulted in only three producers — Gulf Production Company, California Company and Republic Production Company — sustaining a loss in allowable production during the last period in June as compared to the first period in the month, although some of the producers succeeded in materially increasing their potential daily output since June 1.

The 210 completed flowing and pumping wells in the field at the time of the last potential production gauge were credited with a daily output of 1,060,083 barrels, as compared to 839,786 barrels daily potential on June 1. This gain of 220,297 barrels was aided by the completion of 23 new producers during the intervening period, while some of the older wells now register a higher potential flow on brief gauges because of rock pressure having built up because of the entire field being on back pressure.

Twelve additional 40-acre units were placed on production during the first half of June, making a total of 105 for the field, including a 40-acre unit around the Gibson-Johnson wildcat producer, located in the Llano area, about nine miles north of the Hendrick field.

Allowable production in the Hendrick field will average about 833 barrels daily per well during the last period in June, while the estimated potential production per well daily figures 5048 barrels, the latter being based on June 15 official gauges. On this basis the Hendrick field operators will be producing their wells about .16½ per cent. of their potential daily yield.

Although a number of wells in the Hendrick field register a high potential flow because of having been kept under back pressure since the enforcement of proration on May 5, 1928, there are some wells that would register an even greater potential if opened up. Cranfill & Reynolds et al's two wells on the Hendrick 20-acre "C" lease, Section 33, Block 26, have never been opened sufficiently to lower the pressure gauge below 300 pounds, owing to the danger of pulling in water from adjoining leases, where wells were drilled into water when in process of completion in order to try for a record flow of oil as was obtained by the Hendrick 1-C. These two wells on the 200-acre tract earned a daily allowance of 4974 barrels during the last half of June, and registered a potential daily flow of 57,745 barrels when gauged partly open last week.

Atlantic Oil Producing Company and Collett-O'Keefe's joint properties registered the highest potential for the field, having made 212,919 barrels estimated daily from 27 flowing wells. The Hendrick "F" lease, which is owned 50-50 by the two interests, gauged 145,210 barrels potential from six wells, and will be allowed to produce at a maximum rate of 15,319 barrels daily during the period.

Two more pipe lines are now available to handle oil from the Hendrick field, as the Pasotex Pipe Line Company is winding up construction work on its eight-inch carrier extending to the Pasotex Petroleum Company's 10,000-barrel refinery at El Paso, while the Skelly Oil Company and Burford Oil Company's six-inch line extending to refinery site and tank car rack at Pecos City is also about ready for service.

Skelly Oil Company has six tests in the big lime and about ready for completion, with work under way on four

HENDRICK FIELD OPERATIONS

The status of operations in the Hendrick field, West Texas district, at the close of last week is shown below by companies:

Company	Locations and Rigs	Drilling Tests	Tests in Big Lime	Completed Wells	Initial Produc'n	Average Produc'n
Amerada Petroleum Corp		1	1	..	.....	.....
Atlantic Oil Prod. Co.	3	1	3	19	83,810	*11,525
Atlantic & Collett-O'Keefe	1	3	1	6	69,000	*11,315
V. T. Bolin & Co. et al		1	..	..	.....	.....
The California Company		..	..	8	7,550	2,470
Cranfill & Reynolds		1	1	5	53,825	*9,100
Eastland Oil Company	1	..	1	..	.....	.....
Gulf Production Company	1	12	1	13	66,070	*12,420
Humble Oil & Refining Co.	2	1	7	23	88,420	*15,585
Independent Oil & Gas Co.	2	..	3	15	61,220	*5,585
Landreth Prod. & Roxana	2	10	6	12	51,865	*9,825
Magnolia Petroleum Co.		..	..	8	12,335	1,170
Marland Production Co.	1	2	1	3	31,800	*3,220
Murchison & Cranfill Bros.	3	..	1	6	12,675	*1,165
Murchison et al	1	..	..	..	.....	.....
Prairie Oil & Gas Co.	1	1	1	1	10,000	*1,020
Pure Oil Company	7	2	8	14	47,105	*12,405
Republic Production Co.		1	5	6	21,960	*9,285
Roxana Petroleum Corp	3	3	4	24	123,080	*16,555
Sheldon-Burden et al		..	1	..	.....	.....
Skelly Oil Company	2	2	6	..	.....	.....
Southern-Dixie Oil Co.	3	7	4	17	37,865	*7,920
Southern-R. A. Westbrook	7	10	12	17	45,850	*14,380
Texon Oil & Land Co.	4	..	3	5	20,475	*3,745
Winkler Oil Prod. Corp.		..	1	..	.....	.....
Totals	44	58	71	202	840,765	148,730
Totals Previous Week	47	53	74	190	783,205	143,580

(*) Production partially pinched.

more, all on locations practically proven for flush production.

Llano Proration Plan

The Hendrick field proration advisory committee of seven operators, with J. D. Collett, Fort Worth, chairman, is to meet shortly to make a fresh effort towards perfecting a proration scheme to be applied to the Llano area, located in North Winkler County. This committee was requested recently to work out a suitable plan of controlling development and production in the Llano pool by the Texas Railroad Commission and submit same to the latter conservation body for approval before an official order is issued. Prompt action will likely be necessary, since Humble Pipe Line Company is building an eight-inch line from the Hendrick field to Gibson-Johnson et al's producer on the Leck-Daugherty land, while Roxana & Llano Oil Company's Scarborough 3, located near the New Mexico line, is due to hit the big lime formation this week, provided a fishing job at 2570 feet is cleared up. Texas Pacific Coal & Oil Company has awarded drilling contract to the Southwestern Drilling Company for a test to be drilled on the Lum Daugherty 640-acre tract, location being in the southeast corner of Section 4, Block 74, and southwest of the Gibson-Johnson well. Empire, Prairie and Humble hold the offsets to the TP location.

Yates Field Operators Start Big Drilling Campaign

San Angelo, Texas. — Machines and rigs for the immediate drilling of more than 40 proven locations in the Yates shallow field are being moved in to establish oil production on the 50 locations made necessary by the new proration order that allots daily production on a basis of potential production and producing acreage effective July 1. While this new activity is being pushed at top speed, a majority of the wells in the field are being deepened to try for a greater potential production when official gauges are taken.

The Yates field is second to the Hendrick field in point of drilling activity in the West Texas district and is almost certain to register a daily potential production of more than one and one-half million barrels when the hourly gauges are taken late next week.

The Texas Railroad Commission had not made public Tuesday its decision on the question of taking over the enforcement of proration in the Yates field after having held a hearing at Austin June 11. Only two protests were registered against the commission taking charge of the situation and these are almost certain to be overruled.

The output of the Yates field was raised to 60,000 barrels daily June 15, and will be given another 5000-barrel increase in a few weeks by the looping of Humble's line.

An oil strike on a wildcat block in Ward County, and three minor extensions to producing areas in Crane County were among the important developments during the past week. Rector Oil Company, Amerada and Marland's wildcat test on State fee land, located in southeastern Ward County, bailed about 10 barrels of 36 gravity oil from lime at 2290 to 2300 feet, but developed water when carried to 2311 feet. This test is located in Section 30, Block 4, H. & T. C. Survey, and encountered the big lime at 2280 feet.

C. C. Duffey and associates of Midland were completing their first oil producer in Crane county early this week, after nearly a half dozen wildcat failures. Their Cowden 1, located in the southwest quarter, Section 18, Block X, filled about 1600 feet with oil from lime pay after drilling 37 feet in to a total depth of 2390 feet.

Texas Pacific Coal & Oil Company's University 1, Section 34, widened the Church and Fields area several locations to the northwest with promise of making a pumper from lime pay at 2991 to 3012 feet.

Humble's University 1, located in the southeast corner of Section 40, is swabbing 200 barrels daily at 2921 feet.

Completions continue in a large volume each week in the Hendrick field but field work is still at a peak level even though proration has been in effect for six weeks. The new production being added does not influence the output of the field, as it is limited to 175,000 barrels daily.

Pasotex and the Skelly-Burford lines were completed into this field during the past week but contractors have not finished testing same with water.

Lease activity along the lime high extending from the Hendrick field in a north direction into Lea County, New Mexico, continues active and during the past week Amerada Petroleum Corporation, Magnolia Petroleum Company and Humble Oil & Refining Company bought interests in blocks and checkerboard tracts. Amerada acquired a one-third interest in the Texas Production Company and Columbian Carbon's producing well and 16½ sections of leases on government permit acreage. The well is located in Section 22 and within three miles of the Texas line. It has been shut in since testing good for 20,000,000 feet of gas and 200 barrels of oil from lime at 3213 feet last November.

Chalk-Roberts Field To Have Market Outlet

Big Spring, Texas. — The voluntary practice of shutting in all wells completed in the 2500 and 2900-foot oil producing horizons in the Chalk-Roberts field, located on the Howard-Glasscock County line, is now in danger of being discontinued because of tentative plans of four separate groups of operators in the area to build pipe lines and market the production of the deep pay. The shallow production is being given a market by the Coltex Refining Company, which has a gathering system connecting with its refinery at Colorado, and paying a flat price of 80 cents per barrel at the well, but the deep production is without a market. Fifteen wells have been drilled into the 2500 and 2900-foot horizons, with an estimated daily output of 25,000 barrels, and a price of 60 cents per barrel is posted by Magnolia.

The practice of shutting in the deep wells as completed has been in effect since the second producer was completed early last February, and in the meantime new developments have been on the increase because of heavy lease purchases by substantial independent companies. Cosden & Company, Inc., Amerada Petroleum Corporation, Moody Corporation and Roxana Petroleum Corporation have been the most active purchasers lately, and more deals are pending. Magnolia is the only concern that has marketed any appreciable volume of the deep production, and its pipe lines were severed in February because of congestion of its trunk line system.

Excepting Amerada, the late purchasers of lease protection and also partially developed properties in the field have either a refinery or pipe line outlets projected to protect their investments. Cosden & Company has made inquiries for costs estimates on a pipe line to Sweetwater, where a five or 10 thousand barrel daily capacity skimming plant is to be erected, while Reese S. Allen, Wichita Falls and Amarillo refinery owner, is perfecting plans to build a line in conjunction with the Moody Corporation and F-H-E Oil Company, the latter two being joint owners of producing leases, to Big Spring, where a refinery may follow.

Roxana Petroleum Corporation is making an effort to strengthen its position in the area by acquiring more developed properties, and can be the first new crude buyer in the field, owing to the Shell Pipe Line Company's 10-inch McCamey-Healdton trunk line being within 10 miles of the heart of the field. The entrance of the Shell line into the field is expected to be announced shortly, but actual construction work on the line may be held off until others make definite steps towards providing a partial market for the shut-in production.

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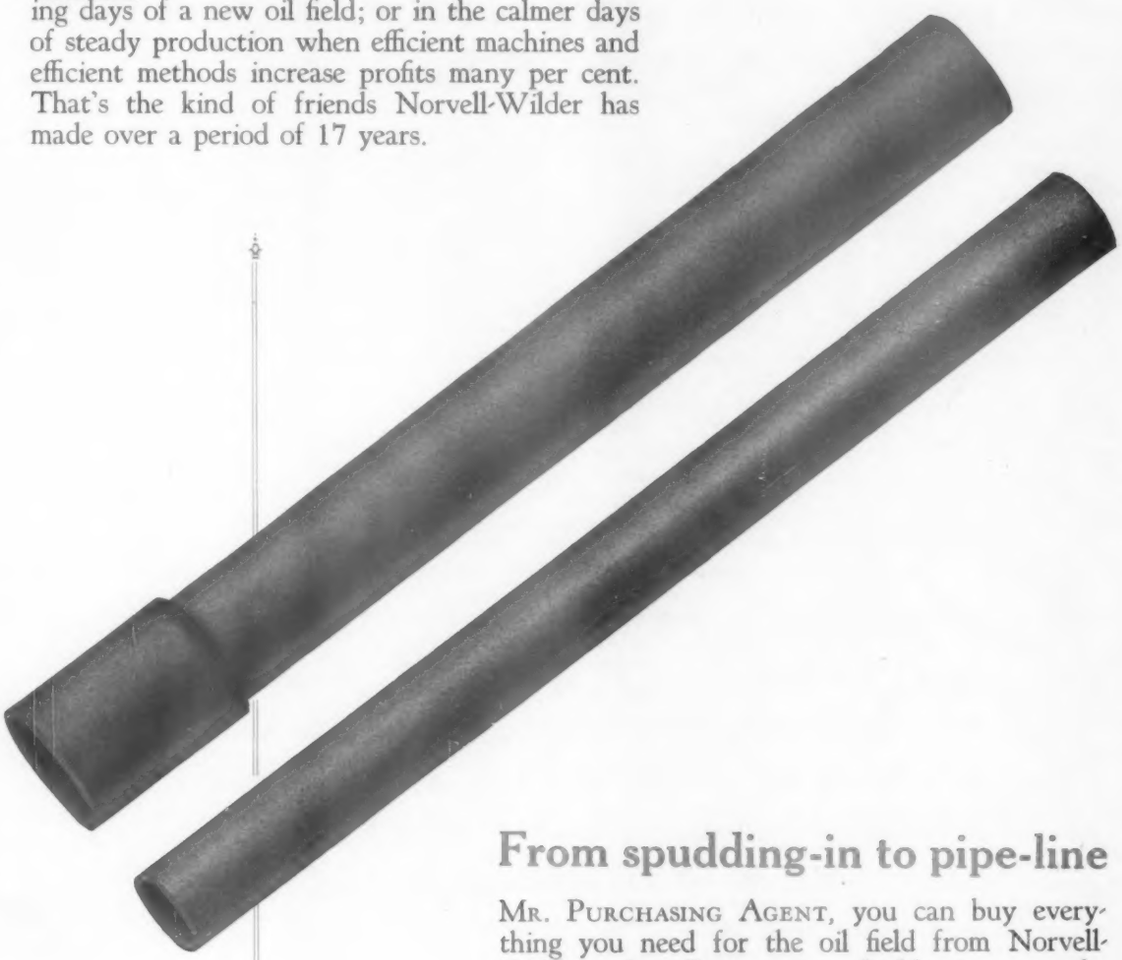

From spudding-in to pipe-line

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Big Drilling Program Starts in South Little River

Development proceeding under plan similar to West Texas method of prorating output on acreage and potential production

By WALLACE DAVIS
Staff Representative

TULSA. — Development of major Wilcox sand production 12 miles southwest of the western rim of Greater Seminole coincidental with the opening of a wide drilling campaign in the South Little River country has resulted in the most intense activity Oklahoma has seen in the past year.

Upwards of 80 locations are due to spud south of Little River field proper within the remainder of June. The program will follow, except for minor disagreements now seen to loom, one of fine logic, planned by the conservation committee, umpire and operators. According to the campaign outlined there will be two wells drilled on each 40. On completion of these locations as producers the wells will be pinched to 100 barrels until August 15. A program of proration following that date will control the output as is being handled in West Texas disturbing areas, producing according to units. It is understood that each 40 will be allowed to yield 1600 barrels under this scheme, allowing 800 barrels to the well, and such proration is to continue until November.

Some protests were being made early this week on the part of small acreage holders against major companies, contesting certain locations offsetting their tracts, indications were that the restricted number of locations would not be held unless changes were made. Blackwell Oil & Gas Company contested the staking of a location by Pure Oil Company in the southwest of the southwest of the northeast of Section 11-7-6, and was moving in materials for the second pair of locations on its 40 offsetting Pure's lease. Locations for No. 3 were staked by Blackwell in the northwest of the northwest of the southeast of Section 11, and for No. 4 in the northeast of the northwest of the southeast of Section 11. Further disagreement was had between Champlin Refining Company and Magnolia Petroleum Company following staking of a location by the latter in the southeast of the northeast of the northeast of Section 14-7-6. Champlin contested this location, and was making location Monday in the northeast of the southeast of the northeast of Section 14, the second location on this 20.

T. B. Slick's Harper 1, in the northeast of the northwest of the southeast of Section 19-7-9, St. Louis area of Pottawatomie County, flowed with agitation 7165 barrels at Monday's gauge from Wilcox sand at 4105-26 feet. This yield compares with an initial flow of 3821 barrels early last week bottomed in Wilcox at 4122 feet. Following completion of this well Magnolia Petroleum Company deepened its Hembree 1, in the northwest of the southeast of Section 19, to 4120½ feet, making a 5550-barrel well of an old producer of 125 barrels on air. Monday the flow, with agitation, had increased to 5800 barrels. The well formerly made better than 4000 barrels from Wilcox, the first big producer from this formation in the St. Louis area.

Reports from the field Monday afternoon showed Magnolia's No. 1, in the southwest of the southwest of the northeast of Section 19, swabbing 150 barrels from Hunton lime at 3930-32 feet. Magnolia's No. 2, in the northeast of the northeast of the southwest of the same section, swabbed 116 barrels from Hunton lime at 3928-80 feet, and was drilling in Sylvan shale at 4015 feet. This company's No. 1, in the northeast of the northeast of the southwest of Section 19, had reached 3782 feet and was cleaning out the eight-inch hole to the bottom. Magnolia's No. 1, in the northwest of the southwest of the southeast of Section 20-7-5, had no show at 4135 feet after topping Viola lime at 4118 feet.

The nature of formations in this suddenly important territory is serving to keep down fear of another major Wilcox pool resulting. The fact that several nearby locations are running approximately 100 feet lower than the two big producers would indicate that the area of big pay is very limited. Operators in the St. Louis-Maud territory had not arrived at any definite operating program early this week.

Production from Greater Seminole reached a new low Sunday with 256,397 barrels, representing a decline from 262,060 barrels on Monday, June 11. The output by fields for June 17 and 18 was as follows:

Field—	June 17	June 18	Wells
Little River	44,494	44,341	132
Bowlegs	61,277	60,902	320
Earlsboro	86,944	87,080	272
Seminole City	50,875	51,552	302
Searight	12,807	13,080	68
Totals	256,397	256,955	1,094

A failure of outstanding significance is Tidal Oil Company's Schecor 1, in the southwest of the southeast of the southeast of Section 7-7-7, east of Little River field proper. The Wilcox sand was penetrated at 4431-32 feet for a hole full of water.

Whitney et al's No. 1, in the northeast of the northwest of the northeast of Section 25-7-6, a failure in the Wilcox sand, was plugging back early this week, expecting to test a showing in the Cromwell sand at 3390-3420, a sand which was drilled through with rotary tools.

Gypsy Oil Company's Seminole 1, located in the southwest corner of Section 5-8-6, was flowing 50 barrels daily early this week through tubing which was set for the purpose of pumping this amount. This well was drilled into the Wilcox sand last week at 4327-40 feet after being shut down for approximately a year with casing set in top of the Viola lime, found at 4191 feet. It flowed 3210 barrels initial and then went dead. Intentions of the operators were to pump the allowed amount from the well until it suddenly resumed its flow of the desired amount. This location is one mile northeast of Gypsy's Dosar 1, which has been producing 100 barrels daily, pinched in, since late in 1928. It either opens a new producing area or extends the productive area opened by the Dosar well.

Tulsa. — Roxana Petroleum Corporation's Rouse A-1, in the southwest of the southwest of Section 20-19-4, Logan County, had 4500 feet of oil in the hole Monday morning which was coming from lime bottomed at 6060 feet.

Roxana's Ross B-1, in the southeast corner of Section 29-19-4, was drilling in shale at 5970 feet. Rouse B-1 had reached 5210 feet in broken lime.

Roxana's two big producers have shown no loss in daily yield for more than a month, Freelove 1, the northernmost producer in the Roxana field, making 2035 barrels, and McCully 1, discovery well, making 1925 barrels. Tools for Freelove 2, a shallow sand project on the No. 1 location, were being moved in late last week.

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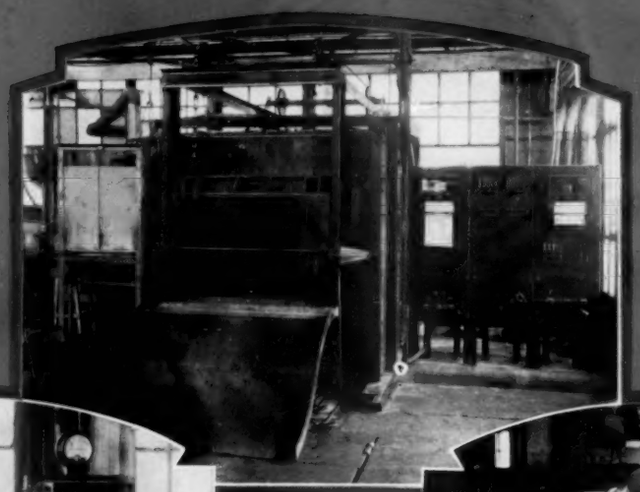

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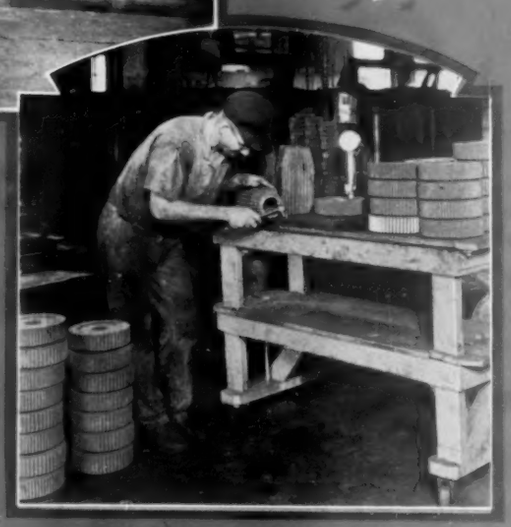

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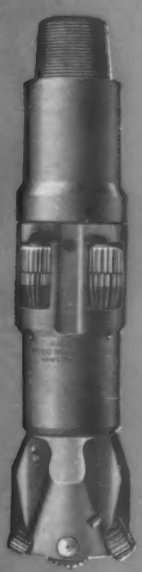

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Long Beach Production Climb Halted Around 200,000 Barrels

Decline of older producers serves to offset output of new wells; locations being made to replace completions from week to week

By BRAD MILLS
Staff Representative

LOS ANGELES. — Long Beach seems to be in the throes of that famous "tired feeling," so common to all critical areas after a few months of sizzling activity. Production continues to hover above 200,000 barrels, gaining slightly over the previous week, but the decline from the 135 deep wells was not to be denied, and eight completions were requiresd to keep the yield above that of the previous week. A difference of opinion exists as to whether the field is about due for a plunge downward or is only temporarily resting on its past laurels. A survey of the field shows that 194 wells are drilling for the lower zone, an almost unbelievable number when it is recalled that 135 wells have already been completed. Of the total number drilling, 162 have been started from the surface and 32 are being deepened. More than 40 wells are due for completion during the next month, with the possibility that the number may be nearer 50.

Encouraged by slight extensions, locations are being made a good distance outside the presen producing limits George Langstaff's Bixby 1, located 540 feet west and 200 feet north of the northwest quarter of the intersection of Wardlow Road and the Pacific Electric right-of-way, is attracting wide attention. The well is located about 400 feet west of the old United Oil Company's Bixby 2-1, sometimes known as the United-Amelia, which was drilled to 4835 feet in 1924 and which flowed some oil while being abandoned. This feature, together with the possibility of a fault line separating this location from the Los Cerritos area, makes the well unique among wildcat tests along the fringe of the field, since the original Long Beach uplift may be tapped here, according to some geologists.

New locations are being made at a rate coresponding favorably with the number of completions from week to week. This fact complicates the situation and makes it impossible to predict the outcome of the greatest secondary development ever known in the oil industry. As long as good wells are completed—and they are almost as large now as three months ago—new locations will be made. The major operators, particularly the Shell Company, will keep their tools busy. Shell plans to keep more than 30 strings busy during the summer.

One good reason for the large number of new locations is the fact that all parts of the field have yielded good wells, making it attractive to develop every nook and corner. The decline from the edge wells has been as slow as those on top of the structure. The producing sand in the edge tracts is thinner than that in the center of the field, but the former is practically virgin territory, while production has been coming from a considerable distance in the sand for several years near the apex. One factor offsetting another, good wells have been the rule in all parts of the field.

Completions

Completions during the week were: E. B. Campbell, No. 3; initial production 500 barrels; total depth 6090 feet; gravity 28.0; cut 3.4 per cent.

George F. and J. Paul Getty, No. 6 (wo); initial production 2000 barrels; total depth 6650 feet; gravity 30.0; cut 1.4 per cent.

Herndon Petroleum Company, No. 6; initial production 1000 barrels; total depth 6213 feet; gravity 30.1; cut 1.6 per cent.

Pan American Petroleum Company, U. P. I. (wo); initial production 1000 barrels; total depth 5805 feet; gravity 28.3; cut 0.2 per cent.

Richfield Oil Compony, Haas 16; initial production 3200 barrels; total depth 6326 feet; gravity 29.6; cut 0.1 per cent.

Shell Company, Pickler 7; initial production 700 barrels; total depth 6659 feet; gravity 30.0; cut 1.0 per cent.

Superior Oil Company, Crew 4; initial production 1500 barrels; total depth 6683 feet; gravity 29.6; cut 1.0 per cent.

The Texas Company, Harlow-Kent 9; initial production 1700 barrels; total depth 6700 feet; gravity 29.2; cut 4.0 per cent.

Richfield

The Continental Oil Company, already a large producer in the Richfield area, has completed Mullin 1 with an initial production of 900 barrels from 4065 feet. The oil is 26.5 gravity and shows a cut of only two-tenths of one per cent. It is one of the best completions in months and gives the Continental a large production in tht west side of the field. The company acquired three leases in this area a few years ago and has had phenomenal success in developing the deeper sands. Kraemer 5, regarded as the most important deep test in the field, is standing cemented ot 5345 feet. Several hundred feet of broken oil sand was cut and the successful completion of the well would add to the value of several leases in the west part of the field.

The completion of a 1500-barrel well in the Seal Beach field was the most surprising development in this area since the deep sand was discovered several months ago. The Superior Oil Company's Kenkel 1, deepened to 6555 feet, performed in a most sotisfactory manner and exploded the theory that the 6100-6600-foot zone cannot yield large wells. Other wells have been deepened to the zone, but they failed to make an impressive showing. The depth of the sand and the fact that the operator got more experience than profit in developing the Wasem sand below 5000 feet have completely dampened the spirits of the average producer. The Superior well will undoubtedly result in the deepening of several other Wasem producers, since production has dropped to a very low figure in many of these. The action of the well indicates a somewhat stable condition, gas production being more than 10 million cubic feet. The oil is 27.3 gravity and the cleanest yet found in the field. More than half of the Wasem producers can not be deepened, due to mechanical difficulties and the small casing set after deepening from the Selover sand. The Superior well may not be representative, however, since Marland and Richfield are producing their 6500-foot wells with compressors.

Potrero

Some idea of the extent and shape of the Potrero field willl be gained with the completion of the Associated Oil Company's Voohees 1, which is now drilling below 2400 feet. The well is checking favorably with both Cypress 1 and 2, a small oil showing having been found at 2000 feet. Cypress 2 has been pinched in to 600 barrels, due to lack of storage and as a precaution. The history of light oil producers in California has been rather dark, especially when allowed to flow at capacity for long periods. There is

The ECONOMY of

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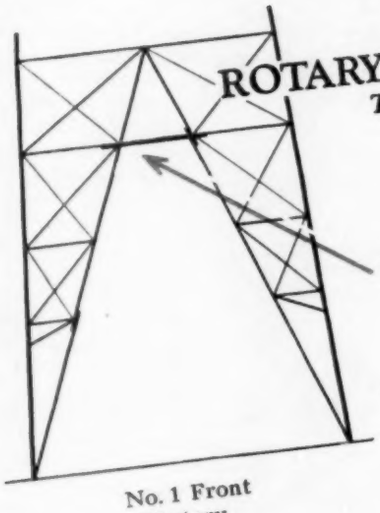

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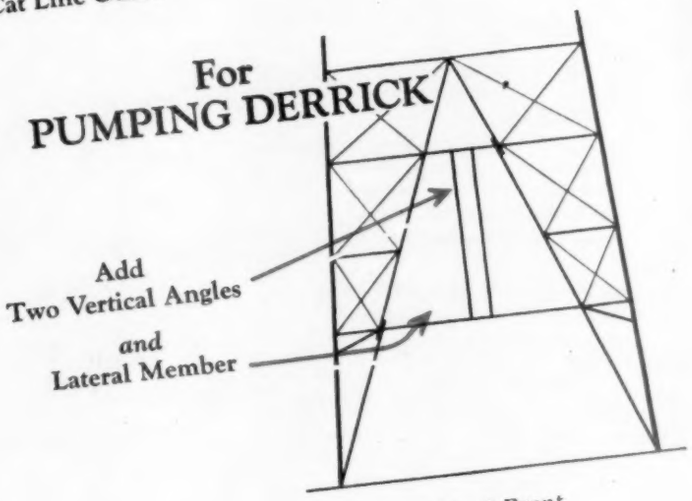

No. 2 Front
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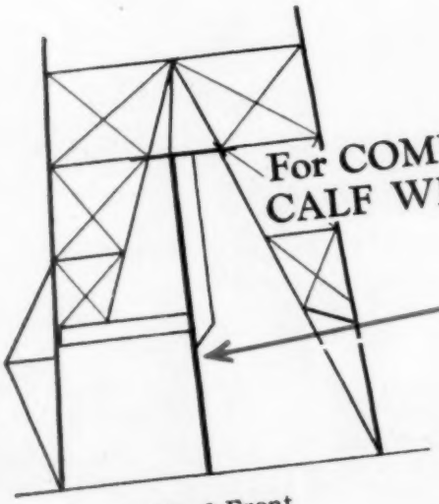
For COMBINATION or CALF WHEEL FRONT



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no sign of water encroachment in Cypress 2 and the gravity of the oil remains the same.

The Pacific Eastern Production Company has completed its second well in the Fruitvale field, but the production test has not yet been completed. The new well is acting almost exactly the same as the discovery well and is producing at the rate of 200 barrels. Total depth is 3860 feet, with the 10-inch water string cemented at 3827 feet. The well flows occasionally when agitated, but it is essentially a pumping well. The third well will be completed within a week and is expected to show the possibilities of the area when a larger body of sand is included. Number 1 was completed with only 14 feet of oil sand, while No. 2 in producing from a 30-foot body. The third well will be completed with nearly 100 feet of oil sand and shale.

Large wells seem the rule, rather than the exception in the Ventura field, where the 7000-foot mark has become a comparatively shallow depth for completions. The Shell Company's Edison 21 has been completed with an initial production of 2200 barrels from 7220 feet, giving this company a large production below 7000 feet. The oil was 29 gravity and showed a cut of nine per cent. The casing includes 8⅝-inch at 5000 feet and a 5¾-inch oil string on bottom. The latter was cemented through perforations at 5160 feet, giving the well more than 2000 feet of producing sand. The Associated Oil Company completed Lloyd 24 at 6505 feet, with the hole in condition for deepening if necessary at a later date. The well came in barefooted, with an initial production of 1500 barrels. The final shutoff was made with nine-inch casing at 5560 feet, giving the well nearly 1000 feet of open hole.

Associated is experiencing mechanical trouble at 7957 feet in Lloyd 100, several joints of drill pipe having been lost in the hole. An attempt was made to recover it with an overshot, but the latter froze fast at 7155 feet. The company was particularly anxious to complete the well at 8000 feet, but probably will abandon the idea of drilling deeper if the hole is cleaned out. The well will flow in its present condition, but its completion under such circumstances would slightly detract from the credit the company deserves for drilling to such a depth. When completed, it will be almost 400 feet deeper than the deepest oil well ever drilled.

Ventura Wildcat

The M. K. and T. Oil Company has abandoned the idea of production above 5000 feet in Foster 1, a wildcat test just outside the Ventura field, and is now drilling in oil sand below 5100 feet. As a last resort, the well was placed on a compressor but produced as much water as oil from 4995 feet. The action of the well on the original test indicates commercial production at a greater depth, since the wells offsetting it in the proven area showed little oil at a corresponding level. The unexpected showing of the M. K. T. well adds greatly to the value of the leases between it and the main field.

After two unsuccessful attempts to prove the Union Avenue district the Pacific Eastern Production Company apparently stands a better chance for commercial production in No. 3, which was drilled on the theory that Nos. 1 and 2 were located slightly off structure. The well is about 100 feet higher than either of the former tests, indicating that both the oil and gas found in the original well will be found in larger quantities in the third attempt. The company cored a good oil sand from 3835 to 3855 feet and has cemented a string of 10-inch casing at the former depth. The first well partially exploded an old theory that oil and gas was practically out of the question in the bed of the San Joaquin valley. The company labored for more than six months in trying to make a commercial producer of No. 1. Number 2 was drilled this spring and proved to be off structure. The third well holds more promise than either of the other tests and may be the direct cause of extensive drilling along the eastern fringe of the valley. The fractured condition of the sand and the high ratio of gas to oil hindered operations in the first well, which was drilled more than 1000 feet below the first important showings. The Union Avenue area is only a few miles south of the Kern River field, and although regarded as a valley location, could easily be related to both the Kern River and Kern Front fields.

Rincon

The status of the Rincon field remains unchanged, the 3000-3400-foot zone showing the only worthwhile production. Miley's Hobson 1, regarded as the crucial test of the area and touted as a possible gusher, failed to make an impressive showing from 4985 feet. The company has announced, however, that the test was primarily to try the nine-inch shutoff at 4830 feet rather than to bring the well in. The hole was bailed and swabbed but it was evident that production could not be obtained. Drilling was resumed, with the hole in condition for a test at any point. Pan American completed State 5 with an initial production of 500 barrels from 3412 feet. Although slightly deeper than other wells nearby, it is producing from the same general zone. The 13⅜-inch casing was set at 2500 feet and the 10¾-inch at 3045 feet, giving the well more sand than the average completion. General Petroleum Corporation's Thompson 2 made a very creditable showing after getting away to a poor start, having settled to 500 barrels of clean oil. The well was completed at 2980 feet, making it one of the shallowest producers in the favored zone. Field production has climbed to 3500 barrels, but when it is considered that 17 wells are required to account for this amount, the field as a whole offers little promise of entering the major areas. Wells completed with a production of 600 barrels soon decline to 200 barrels and many have ceased to flow entirely. This procedure in a new field takes much of the edge off of intensive development. The sole hope for a very large production seems to lie in the deeper zones.

The Chanslor-Canfield Midway Oil Company's 750-barrel completion on Section 8-32-23, in the Midway field, was large enough to keep the major operators interested in the deep sand in the district and small enough to place a slight trace of doubt as to the extent of the deep zone. The outcome of the well was eagerly watched, since it was expected to prove that the Republic Petroleum Company's 1100-barrel completion on the same section was or was not a freak. By coming in with a production midway between that of the shallow wells and the Republic completion, the status of the area is still in doubt. The Republic well is still producing at near its initial rate, however, making it possible that the better part of the deep zone lies opposite the C. C. M. O. well.

The Italo-American Petroleum Corporation, now rapidly expanding its field operations, has obtained a lease on Section 20-9-32, in the Cat Canyon field, and will develop its holdings when the market for heavy oil from this district becomes more stable. Crude from this field is very viscous and is used extensively for road construction.

Revival of drilling operations in certain Kern County districts, particularly in promising wildcat areas, is anticipated if the market situation continues to improve. Major companies are not seeking new fields for immediate development but are wildcatting on the theory that oil from new fields will be in demand following the decline of large producing areas in the Los Angeles basin. The consumption of natural gas is increasing in California, and Kern County districts are being looked upon as holding possibilities along this line. There is a surplus of natural gas in the southern part of the State, but this condition is not expected to prevail permanently; and in addition, the feasibility of piping natural gas to cities as far north as San Francisco is admitted.

The Galconda Petroleum Company, now operating the properties of the Magenheimer Securities Company, has entered the Lompoc area and will drill a well on Section 6-7-33. The test will be a direct offset to a wildcat drilled several years ago by the General Petroleum Corporation. The well produced some high gravity oil but failed on a commercial test.

The Wilshire Oil Company's Buck-

(Continued on page 78)

Proration Movement Lowers Output During May

Daily average lowered 28,500 barrels, principal loss being in West Texas area; field work continues at same rate, with more failures

By A. R. McTEE
Staff Representative

DIRECT results of proration were shown in United States production figures for May. The daily average output of crude decreased 28,500 barrels, the average for the month being 2,370,000 barrels.

Total recovery for the month showed slightly higher than for April. The difference between the totals, however, was less than the total output of the country for one day. May showed 73,476,200 barrels produced against 71,961,100 barrels in April.

All of the Texas decrease was in West Texas, principally Winkler County. On May 5 the Texas Railroad Commission restricted the output of that field to 150,000 barrels daily, nearly 100,000 barrels less than what the field had been making previously. Throughout the rest of the month the Winkler yield was held within the figure set by the commission.

Oklahoma and Kansas showed reduced output totaling 13,750 barrels. Of this amount, 10,350 barrels was in Oklahoma. The Seminole area was responsible for most of the slump inasmuch as the trend of the district was downward during the entire month. Little River was the only single field where there were threats of an upward swing.

Of the fields showing gains as compared with April, California stood out. Long Beach accounted for 17,350 barrels increase over last month. The Gulf Coast district, including Texas and Louisiana, gained 11,000 barrels, nearly all of which was from the Louisiana side. The Champagnolle field in Arkansas gave that State an increase of 7800 barrels. Eastern States average exceeded that of April by 5100 barrels, and Rocky Mountain States also gained 3700 barrels.

Drilling for the two months did not show enough difference to be of consequence, there being only nine more completions in May than were reported in April. May showed 1495 wells against 1486 for April. The number of failures in May was 41 more than in April, however; and initial production gained 15,553 barrels.

With activity barely holding its own as compared with the previous month and production gradually decreasing, May can be said to have added strength to the market situation. At the end of the month refiners were reported to be enjoying more prosperity than for several months before. Premiums were being paid on oil both in Oklahoma and California, especially on desirable charging stock.

So far, the only tangible evidence of a better situation in June has been a slight revision of prices on certain grades of Eastern States crude. This action is interpreted by some operators as a forerunner of favorable changes in the Mid-Continent. Whether this view is logical or not matters little; proration seems able to check production and this, if continued, is bound to bring better markets ultimately. June may not bring the price increase, but as things now stand it seems certain to aid in that direction.

UNITED STATES PRODUCTION

Following is the gross estimated production of crude oil in the United States for April, as compiled by the American Petroleum Institute. There is a slight difference in the totals herewith shown and those compiled showing individual field production, due to the fact that these figures are final, whereas the others are unrevised estimates:

State—	Daily Average	Monthly Totals
Oklahoma	616,100	18,913,100
Kansas	108,750	3,371,250
Texas (Outside Gulf Coast)	561,450	17,404,950
Gulf Coast	129,850	4,025,350
North Louisiana	43,600	1,351,600
Arkansas	91,250	2,828,750
Eastern States	112,100	3,475,100
Rocky Mountain	82,200	2,548,200
California	630,900	19,557,900
Totals	2,370,200	73,476,200

Texas

Enforcement of proration in the Hendrick field by the Texas Railroad Commission furnished a turning point in the production of the West Texas district after this particular field had climbed to slightly more than 300,000 barrels daily. The commission's order restricted the output of the field to a maximum of 150,000 barrels daily, and the operators kept within this figure.

Drilling in the Hendrick field has not been affected by proration, and a large volume of new production was secured during May from the north end of the structure. This field was credited with a daily potential of 839,786 barrels from 187 wells, and sufficient new production will be added in June to boost the potential above 1,000,000 barrels daily.

Restrictions placed on the Hendrick area gives the West Texas district three fields of major proportions that are being held back in proportion to market outlet. A fourth area loomed during May when Gibson-Johnson et al's Leck-Daugherty 1, located about nine miles northwest of the Hendrick field and near two small pumpers operated by Roxana and Llano Oil Company on the Scarborough ranch, blew in making a heavy volume of gas, water and oil at 3167 feet. This well has since been tested good for about 2500 barrels of oil and three times as much water, but it indicates a new flush area for Winkler County. Immediately upon completion of the test a movement was launched by surrounding lease holders to have the commission apply a development curtailment program, and only one new well has been started. This particular test is being drilled in compliance with lease obligations. A third oil producing area for Winkler County was in prospect late in the month to the south of the Hendrick field when Danciger and White Eagle et al's Sealy 1 made some oil from lime at 3200 feet. Drilling was continued to contract depth and the hole will be plugged back before a test is made. A producer in this area will not have much market significance, since Gulf Production Company is credited with controlling the bulk of the acreage likely to produce.

Wildcat activity in West Texas continues at a high mark, and a small gasser was uncovered in Andrews County by the Deep Rock Oil Company's Harris 1 at 3210 feet. Big production was extended to the south and southwest part of the Yates field, but no new acreage was proven up for the

field during the month. The deep lime in the Roberts-Chalk area, Howard County, was widened to the north a short distance, with prospects of the production trend heading in this direction. Cosden & Company, Amerada, and Moody Corporation made several big lease purchases in May on the strength of this theory, at unusually high prices. Semi-wildcat territory in Jones and Fisher counties added new wells with exceptionally large production for the area. Hucony Gas Company and Atkinson and Sandefer's Tiner 1 made 700 barrels initial flow in the Smith pool, Jones County, and the Sinclair Oil & Gas Company's Steele 1, offsetting the Fisher County discovery well, flowed 800 barrels initial, thus making these two areas look more promising.

New production in the Central West Texas district registered a small decrease, but intensive drilling activities continued due to wildcat efforts in Coleman, Brown and Eastland counties. The Texas Company et al's Vance 1 opened a new gas area in Coleman County, and W. T. Daniels et al's Moody 1, located west of Santa Anna, also furnished a new oil pool with an initial production of 250 barrels at 1840-48 feet. The Pandem and Eubanks pools in Brown County were the most active spots during May, and a number of large wells in the shallow pay were completed in the latter area. The Cook ranch district, Shackelford County, continues active, with Roeser-Pendleton and Marland Production Company taking the lead in new field work.

The Waggoner ranch in Wilbarger County commanded the spot light of interest in the North Texas district with a number of extensions to older pools, and several new strikes. Golding-Cochran and Marland Production Company's Waggoner 1-H, Section 4, Block 17, opened a new pool, swabbing 80 barrels initial at 1910-19 feet. The Texas Company's Waggoner 4-E Section 24, Block 4, furnished an unusually large producer from sand at 2392-2403 feet flowing 1890 barrels natural. The Waggoner ranch is the largest source of new production in the North Texas district, and is rapidly gaining in new field work. Several minor extensions to proven areas in Wichita, Archer and Young counties were reported, but a heavy toll of dry holes is being exacted from the operators engaged in trying to bolster up the production of these counties. Activity in Cooke, Montague and Jack counties were below normal.

Gray County is the only section of the Texas Panhandle district contributing new production of any consequence, and crude purchasing agencies are encouraging new developments in the former county because of the oil being above 40 gravity on the average, with less sulphur content than other sections of the district. Most of the new work in Hutchinson, Carson, Wheeler, Moore and Potter counties is being directed towards building up a greater natural gas reserve for the various gas lines drawing on the Panhandle for a supply.

Other than a few scattered wildcat tests along the Mexia fault proper and "back faults," the East Central Texas district is experiencing little drilling operations. The most closely watched test in the Mexia-Corsicana district is C. F. Lytle et al's Thompson 1, located west of the Mexia field, and engaged in making a try for the Trinity sand production below the 5000-foot level. This deep test is making good progress below 3800 feet.

Gulf Coast and Southwest Texas

Normal activity persisted throughout the Texas Gulf Coast without any outstanding developments. Drilling continued on a number of unproven salt domes. A few shows were encountered, but none of them were considered unusual. There was a slight trend of play in Harris County, south of Houston, near Pearland and a test will probably result. Some leasing has been done in this locality.

Following completion of the Branyon wells northwest of Luling in April, a number of tests have been made on surrounding acreage. Up to this time eight dry holes have been drilled without any important indications of further production. In the Brunner area just north of Luling there is also active trading at this time. Additional drilling will be done in this locality.

The general area north and west of Luling is being watched particularly close, both for pools in parallel faults adjacent to the Balcones and also in the Serpentine. Lytton Springs and Dale have kept attention focused on the district. In spite of many dry holes, operators have been keen to take acreage on the slightest indication of new production. The Branyon well brought all this activity to climax and started the play. The dry holes that have followed this completion have caused a lull, however, and just now the area is quieting down.

Louisiana Gulf Coast

Production in the Louisiana Gulf Coast has been boosted recently due to continued drilling in a number of fields, among them Bayou Boullion, Sweet Lake, East Hackberry, Sulphur and Sorrento. June will probably show a greater output from this section than did May.

Arkansas

The Champagnolle field, Union County, Arkansas, has come into the limelight within the past 30 days. The field is located about 12 miles northeast of the old El Dorado district. It was discovered early in April. Since that time about 20 producers have been completed, the number of drilling operations has reached 40, and the output

PAST TWELVE MONTHS

The record for the past twelve months is an interesting study for comparison purposes, the following table giving field statistics for all states in the Union.

Month—	Completions	Producers	Gas Wells	Failures	Initial Prod.
June, 1927	1,726	1,049	178	499	359,380
July	2,036	1,219	238	579	486,489
August	1,642	982	207	453	439,735
September	1,870	1,092	228	551	380,851
October	1,541	870	225	446	322,603
November	1,651	901	205	545	367,657
December	1,857	1,020	311	256	522,536
January, 1928	1,203	640	179	384	396,150
February	1,376	729	197	450	336,319
March	1,693	884	283	526	555,613
April	1,486	772	216	498	397,825
May	1,495	770	186	539	413,378

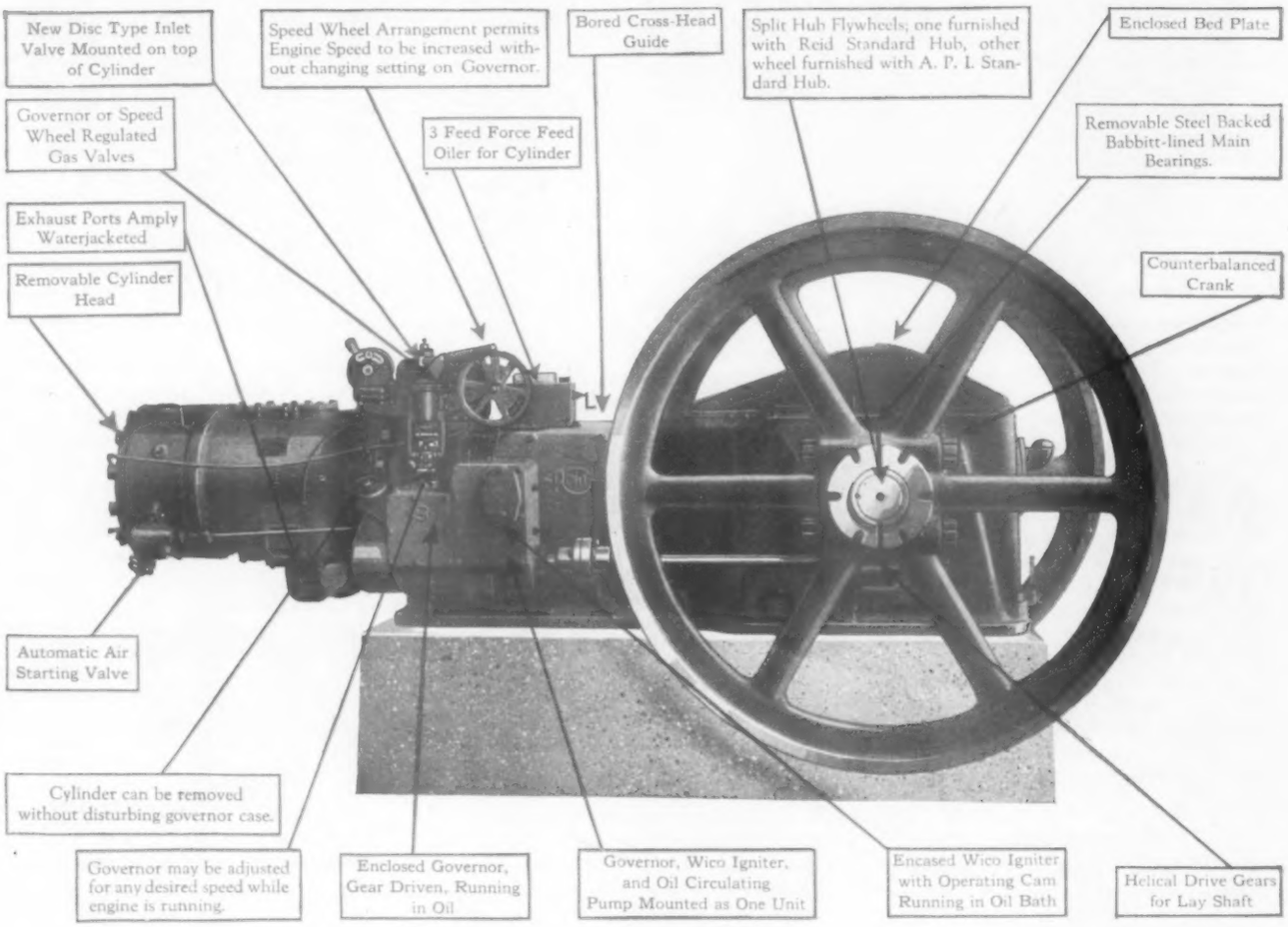
UNITED STATES FIELD STATISTICS

Following are the completions showing producers, gas wells, failures, and initial production of crude by states for the four weeks ending May 26, as compiled by The Oil Weekly:

Arkansas	15	10	..	5	5,671
California	57	47	..	10	53,930
Illinois	10	3	1	6	47
Indiana	16	5	2	9	131
Kansas	62	36	3	23	5,212
Kentucky	120	71	4	45	3,854
Louisiana	56	11	23	22	4,255
Michigan	8	5	1	2	590
Mountain States	37	33	1	3	15,296
New York	15	13	..	2	37
Ohio	100	61	22	17	2,403
Oklahoma	306	145	40	121	85,027
Pennsylvania	80	59	13	8	312
Tennessee	8	6	..	2	495
Texas	515	247	24	244	235,879
West Virginia	90	18	52	20	239
Totals	1,495	770	186	539	413,378
Last month	1,486	772	216	498	397,825

THE REID

Type C Enclosed Two Cycle Gas Engine with these outstanding features—


New Disc Type Inlet Valve Mounted on top of Cylinder
Speed Wheel Arrangement permits Engine Speed to be increased without changing setting on Governor.
Bored Cross-Head Guide
Split Hub Flywheels; one furnished with Reid Standard Hub, other wheel furnished with A. P. I. Standard Hub.
Enclosed Bed Plate
Governor or Speed Wheel Regulated Gas Valves
3 Feed Force Feed Oiler for Cylinder
Removable Steel Backed Babbitt-lined Main Bearings.
Exhaust Ports Amply Waterjacketed
Removable Cylinder Head
Counterbalanced Crank
Automatic Air Starting Valve
Cylinder can be removed without disturbing governor case.
Governor may be adjusted for any desired speed while engine is running.
Enclosed Governor, Gear Driven, Running in Oil
Governor, Wico Igniter, and Oil Circulating Pump Mounted as One Unit
Encased Wico Igniter with Operating Cam Running in Oil Bath
Helical Drive Gears for Lay Shaft

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Ask for Bulletin No. 37

JOSEPH REID GAS ENGINE COMPANY
OIL CITY, PENNSYLVANIA, U. S. A.

BRANCHES AND AGENCIES—Marietta, Ohio; Logan, Ohio; Newark, Ohio; Shreveport, La.; Charleston, W. Va.; R. B. Moore, Bolivar, N. Y.; Frick & Lindsay Co., Bradford, Penna; and Kentucky Distributors; S. R. Shoup, 724 Board of Trade Bldg., Los Angeles, Cal.; Frick-Reid Supply Company, Tulsa, Oklahoma, and Branches, Distributors for Oklahoma, Kansas, Texas, Arkansas and Wyoming. Branch Shop, Tulsa, Oklahoma.

EXPORT REPRESENTATIVES: Oilfield Equipment Co., 30 Church St., New York City. Branch Shop: Tulsa, Okla.

has gone to slightly more than 40,000 barrels daily.

Two small pipe lines serve the district, each a four-inch line. These are far from sufficient to take care of the oil. As a result considerable steel storage has been built. Surveys have been made for three other lines, but no actual construction work has yet been started.

Since its discovery the field has been extended more than a mile toward the northeast. Indications at present are that further increase in the size of the area toward the same direction is assured.

Active drilling exists at Cotton Valley with most of the testing directed toward the Trinity sand. A small degree of success has followed these efforts up to this time, enough to keep several rigs running. Failure of several of the wells to produce has given the area somewhat of a setback, however; and at this time there is plenty of speculation as to just what the outcome of all the drilling will be.

Oklahoma and Kansas

Oklahoma's influence on the general situation centers in the Little River territory. This week the Corporation Commission heard plans to extend the curtailment program which existed until June 15, in the Seminole district, to November 1.

The plan permits the drilling of one well on each 20-acre tract and but two wells on the 40-acre lease. Production from such leases will be 800 barrels to each 20 acres. It is stated that upon approval of the plan by the commission, 75 or 80 new wells will be started in the Little River field.

In Kansas the bulk of activity is confined to Sumner, Marion, Butler, Greenwood, Cowley and Russell Counties. In none of these counties is there immediate prospects for much gain in the output.

Mountain States

The Mountain States section showed increased activity during May, completions having jumped from 17 in April to 37 in May. There were corresponding gains in producers and in initial production.

Kevin-Sunburst, in Montana, was the most active field. Several wildcat failures were reported, scattered over Wyoming, Montana, Colorado and New Mexico.

Considerable excitement exists concerning Marland's Eaves 1, in Lea County, New Mexico. The well is producing 90,000,000 feet of gas at 2968 feet. It is in the line of play north and west of Winkler County, Texas. Many operators feel that production will extend into New Mexico, a theory which has been strengthened by the Leck-Daugherty 1, northwest of the Winkler pool.

California

Long Beach continued as the center of interest in California during the entire month, pushing production past the 200,000-barrel mark for the first time since the original boom days of 1923. Unlike the development of other areas, wells completed in the field came in with an initial production almost as large as the first producers finished several months ago. A survey of the field at the end of the month disclosed many interesting developments. Deep wells completed near the center of the field showed declines as great as many producers completed in virgin territory near the edge of the structure, showing that a thinner sand which has never produced far below the top layers is as consistent as the thicker sand developed several years ago to a greater depth. Large wells were completed in every part of the field, proving that no particular tracts will win the bulk of the laurels. The tendency to drill deeper was in evidence, the average depth of the completions having been much greater than that of earlier months. One well was completed below 7400 feet but production was disappointing. Developments during the month proved that the peak will be reached gradually and the decline will be slow, where it was originally thought that the peak would be sharp and the decline rapid.

The Rincon field continues a puzzle. Several small wells were completed during the month, the 3000-3200-foot level proving the only satisfactory stopping point. The decline of these completions has been rapid, since they are producing from a thin body of sand. A good oil sand was found below 4800 feet, but its possibilities are not yet known. An attempt was made to complete a well around 4000 feet, but the result was very disappointing. More than a dozen wells have been completed, production hovering around 3000 barrels.

In the Ventura field, the Associated Oil Company reached 7950 feet in Lloyd 100, the deepest well ever drilled in the area and potentially the deepest oil well ever drilled. When drilling was stopped, an unusually good oil sand was in evidence. The well has more than 2500 feet of oil sand and could have been completed at any depth below 6000 feet. A further curtailment of production was made during the month, due to the re-proration of the older wells and the reduction in the newer completions. The demonstration staged by the M. K. and T. Oil Company's Foster 1, located just outside the producing limits of the field, was a distinct surprise, since wells just inside the field failed to do even as well at the corresponding depth. On a production test, the well produced oil and water at the rate of 600 barrels. More hole will be made in an effort to pick up the sand found below 5000 feet in the main field.

Potrero proved that it is not a flash in the pan by producing consistently on a lengthy test. The Associated Oil Company's Cypress 2, the largest well of its kind ever completed in California, and the only producer in the field, was pinched in slightly as a precaution and responded with a uniform flow of 48 gravity oil. The Associated is drilling a third well in the field.

The Chanslor-Canfield Midway Oil Company completed its first deep well on Section 8-32-23, in the Midway field, proving an additional area near the original producer completed two months ago by the Republic Petroleum Company. The discovery of a deep sand in this part of the field is very important, the former production having come from a very shallow formation. The Chanslo.-Canfield Midway well came in with an initial production of 750 barrels. Other companies operating nearby are planning several offsets.

The second well completed in the new Fruitvale field did not show quite as much life as the discovery well. It failed to flow on the initial production test but promises to make a fair pumper. The Pacific Eastern Production Company is completing three wells as a test of the field and does not contemplate developing a large production at this time.

Completion of an 800-barrel well in the Inglewood field at a nominal depth shows the possibilities of the deeper sands in the area. Leases in this field are closely held, temporarily removing the danger of overproduction from an area long regarded as dangerous if intensively drilled to lower levels.

The Union Avenue district, near Bakersfield, is beginning to assume a very doubtful aspect, the second well drilled by the Pacific Eastern production Company having failed on a series of production tests. A third well is being drilled on the theory that the first and second tests were slightly off structure.

Idaho Wildcatting

Casper, Wyo.—The first wildcat operation in Idaho to be pursued by a major operating company is the Meadow Creek structure test which has a derrick up on Section 33-3n-41e, 20 miles east of Idaho Falls. The California Company, subsidiary of the Standard Oil Company of California, is the operator. Representatives, geologists and land men of various oil companies are hurrying into Idaho Falls, and all likely looking structures are being carefully examined.

Dallas, Texas.—The Southwest Oil Production Company has been organized with a capital stock of $100,000 under the laws of Texas, and has headquarters on the second floor of the Magnolia Building, Dallas. Truett B. Cranfill is president, and other officers include Britt E. Cranfill, vice-president, and Porter Farrell, Jr., secretary-treasurer. The company has a number of leases in the West Texas district, and will continue to accumulate acreage in this area.

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The Republic Supply Co., of California, Stores in All Principal California Oil Fields.

GARDNER-DENVER

Mountain States Field Development Notes

More Teapot Suit

Casper, Wyo.—The government has brought suit against Mammoth Oil Company in federal court at Cheyenne, asking for more than $700,000 in an exception to the account of the Mammoth Oil Company, filed in the federal court at Cheyenne. Counsel for the government charged that the company made no allowance for interest at 7 per cent on the value of the monthly production from Teapot Dome and that a mistake was made in the accounting.

Oregon Basin

Cody, Wyo. — An unofficial report concerning a refinery to be built here connects the names of the Texas, the Continental, or the Shell interests with the project. The plant would be run, of course, on Oregon Basin crude, but beyond that there is no definite information available.

Practically all of the major oil well supply companies have secured locations on the new spur on the Burlington railroad. Several of the companies are now building warehouses and sales rooms and will soon be ready for business in their own buildings. There are also a number of new residences going up about the city.

The most important test nearing completion is that of the Lenco Petroleum Company in Section 24-50-100. This test has set casing at 4261 feet and is now drilling below 4282 feet in the top of the Embar with the lime showing around considerable oil saturation. This is the deepest hole in the field and if it should prove commercial will add considerable new territory to the district.

Operations in the field for the last week have been of routine nature, with no important developments noted.

Idaho Development

Pocatello, Ida.—Wildcat operations in the southeastern part of Idaho this year promise to be among the most interesting experiments in the Rocky Mountain region. While heretofore all exploration has been done by independent operators, this spring has seen the coming of the California Company, operating subsidiary of the Standard Oil Company of California, which is now drilling a test on Meadow Creek structure, Section 33-3n-41e, 18 miles east of this city. This test is being started with a 21½-inch hole, extra heavy equipment, and cable tools. The Midwest Refining Company has obtained large blocks of acreage in the territory, and whether or not it will drill a test this summer depends largely on the outcome of other tests now drilling. Several independent operators are drilling in widely separate areas on structures of more or less geological definition. The U. S. G. S. technical paper 152 is the most dependable authority on the territory. It shows 30 different anticlines in Bonneville, Bingham and Caribou Counties.

Casper, Wyo.—United States General Land Office engineers are working in the Wyoming National Forest reserves in Lincoln and Teton Counties, Wyoming, platting all unsurveyed lands in this territory. Practically every foot of this land has recently been filed upon with applications for prospectors' oil and gas permits under the general leasing act. Major oil companies holding permits in the unsurveyed territory are now tying into the government lines in describing location of their permits.

Wildcat Showing

Albuquerque, N. M.—The Midwest Refining Company has 2000 feet of oil standing in its State 1, Section 9-19s 39e on what is known as Hobb's High structure. This is the best looking showing, by far, to have been encountered in this part of the State, and the location is entirely wildcat. The sand was topped at 4065 feet.

Pondera Active

Great Falls, Mont.—Now that a 3-mile long string of producers in the Pondera field has been completed the greatest activity in the field is manifest. Five new wells are starting, and four concerns are reported about to lay lines to Conrad. Two of the new wells will be drilled by California Petroleum Corporation, one will be drilled by Continental Development Company, another by the McCracken interests, and a fifth by the W. M. (Dry Hole) Fulton interests. The Ohio Oil Company, recent entrant in the field, is also scheduled for a well within the month, but no definite announcements concerning this have been made.

The Continental Development Company has secured a right-of-way for a pipe line, and the Texas Pacific Coal and Oil Company is running surveys. Two other operators in the field, it is said, are considering the advisability of laying lines. The Montana Pacific Oil Company has taken an option on a tract of land adjacent to Conrad that will be used for a tank farm if a decision to lay a line is reached.

Hiawatha Dome

Kemmerer, Wyo.—The third large gas well completed in the new Hiawatha Dome field is that of the Custer Petroleum Company, drilled by the Ohio Oil Company, Section 24-12-100, in Sweetwater County, Wyoming. The casing was cemented at 2220 feet and the well drilled 20 feet into what was presumed to be the Wasatch series. The well has been shut in. It was drilled by the Ohio for the account of the Custer Petroleum Company. The discovery well of this field was completed more than a year ago by the Myers interests; the second well was the 56,000 cubic foot gasser completed by the Ohio about a year ago. There are two uncompleted wells on the structure; one is being drilled by the Reiter-Foster Oil Corporation and one by the Sormir Petroleum Company. Both are standing.

Kevin-Sunburst Gasser

Great Falls, Mont.—Kalispell-Baker Oil Company completed the largest gasser in the Kevin-Sunburst field a week ago. It produced an enormous flow of gas for about 24 hours, and then turned to water and has been shut in. It was known as Carlson-State 1 and was on 16-34-1w.

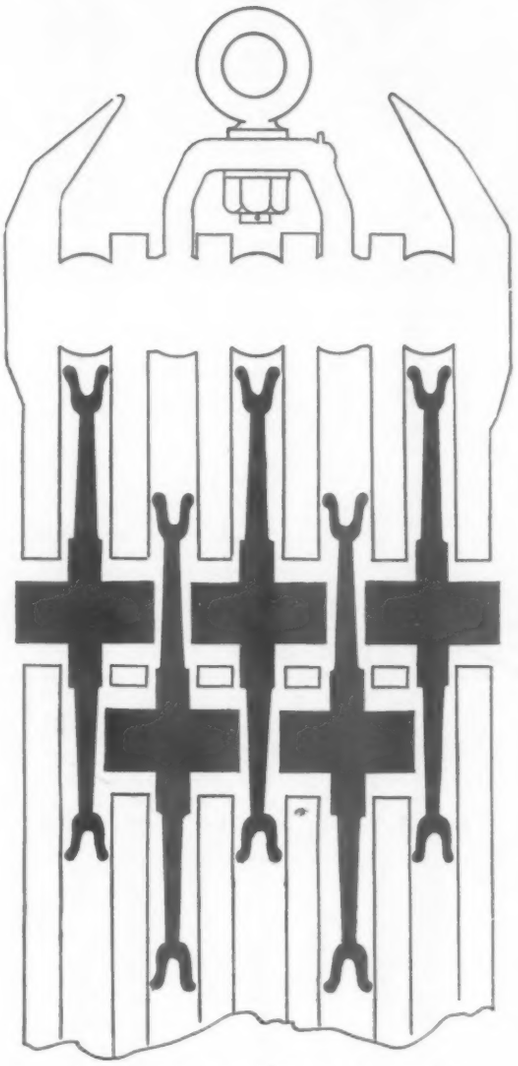
Great Falls, Mont.—The Montana public utilities commission has sustained the complaint of the Big West Oil Company of Kevin to the effect that industrial rates for commercial gas is too high, and has ruled that the Northern Gas Company of Kevin must reduce its rate from 10 cents per 1000 cubic feet to 9 cents.

LaBarge

Kemmerer, Wyo.—Most interesting operations in the LaBarge field are those wells being drilled by Texas Production Company, of which there are six, a part of them already under way and the others rigging up. Other work in the field will probably await the completion of the Midwest Refining Company's pipe line to Opal, on which satisfactory progress is being made.

Denver, Colo. — Midwest Refining Company, Marland Oil Company of Colorado, and Moffat Petroleum Company will drill a joint test in the southwestern part of Iles Dome structure, to be known as Sales 1, northeast of the southwest of Section 28-4-92. The location is three quarters of a mile from No. 4M of the Midwest Refining Company, which recently ran wild and is estimated as good for 1000 barrels per day.

The big red Block-with staggered sheaves



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CRUDE OIL PRICE QUOTATIONS

CRUDE PRICE CHANGES

June 13.—Effective at the opening of the market today Joseph Seep Purchasing Agency advanced the price of New York Transit, Bradford District, National Transit, Southwest, Eureka, crudes, 25 cents per barrel. Buckeye was advanced 30 cents per barrel; Cabel, Somerset and Keiter crudes were increased 10 cents per barrel.

CURRENT POSTINGS

EASTERN STATES

	June 20 1928
New York Transit	$3.05
Bradford District	3.05
National Transit	2.90
Southwest	2.90
Eureka	2.85
Buckeye	2.65
Macksburg	2.80
Gaines	2.60
Somerset	1.55
Cabell	1.45
Ragland	.95
Corning, 35-cent grade	1.45
Corning, 25-cent grade	1.55
Keister	1.20

CENTRAL STATES

Illinois	1.50
Indiana	1.32
Lima	1.55
Plymouth	1.23
Princeton	1.50
Waterloo	1.35
Wooster	1.57

WESTERN KENTUCKY

Posted by Stoll Refining Company for crude from Allen, Warren, Franklin, Davies, Barren,

All grades	1.50

MID-CONTINENT

Prairie, Sinclair and Gulf

28 to 28.9 gravity	.96
29 to 29.9 gravity	1.01
30 to 30.9 gravity	1.06
31 to 31.9 gravity	1.11
32 to 32.9 gravity	1.16
33 to 33.9 gravity	1.19
34 to 34.9 gravity	1.22
35 to 35.9 gravity	1.25
36 to 36.9 gravity	1.28
to 37.9 gravity	1.31
to 38.9 gravity	1.34
39 to 39.9 gravity	1.37
40 to 40.9 gravity	1.40
41 to 41.9 gravity	1.43
42 to 42.9 gravity	1.46
43 to 43.9 gravity	1.49
44 to 44.9 gravity	1.52
45 to 45.9 gravity	1.55
46 to 46.9 gravity	1.58
47 to 47.9 gravity	1.61
48 to 48.9 gravity	1.64
49 to 49.9 gravity	1.67

	June 20 1928
51 to 51.9 gravity	1.73
52 and above	1.76
50 to 50.9 gravity	1.70

NORTH AND CENTRAL TEXAS

Ranger, North Texas, Mexia, Powell, Richland, Wortham, Currie, Moran, Nocona and Lytton Springs Crude

(Humble Oil and Refining Company and Gulf Refining Company)*

Below 25 gravity	.76
25 to 25.9 gravity	.81
26 to 26.9 gravity	.86
27 to 27.9 gravity	.91
28 to 28.9 gravity	.96
29 to 29.9 gravity	1.01
30 to 30.9 gravity	1.06
31 to 31.9 gravity	1.11
32 to 32.9 gravity	1.16
33 to 33.9 gravity	1.19
34 to 34.9 gravity	1.22
35 to 35.9 gravity	1.25
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.31
38 to 38.9 gravity	1.34
39 to 39.9 gravity	1.37
40 to 40.9 gravity	1.40
41 to 41.9 gravity	1.43
42 to 42.9 gravity	1.46
43 to 43.9 gravity	1.49
44 to 44.9 gravity	1.52
45 to 45.9 gravity	1.55
46 to 46.9 gravity	1.58
47 to 47.9 gravity	1.61
48 to 48.9 gravity	1.64
49 to 49.9 gravity	1.67
50 to 50.9 gravity	1.70
51 to 51.9 gravity	1.73
52 and above	1.76

*Humble's postings stop at 44 and above, at $1.52.

NORTH AND CENTRAL TEXAS

(The Texas Company and Magnolia Petroleum Company)*

24 to 24.9 gravity	.76
25 to 25.9 gravity	.81
26 to 26.9 gravity	.86
27 to 27.9 gravity	.91
28 to 28.9 gravity	.96
29 to 29.9 gravity	1.01
30 to 30.9 gravity	1.06
31 to 31.9 gravity	1.11
32 to 32.9 gravity	1.16
33 to 33.9 gravity	1.19
34 to 34.9 gravity	1.22
35 to 35.9 gravity	1.25
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.31
38 to 38.9 gravity	1.34

	June 20 1928
39 to 39.9 gravity	1.37
40 to 40.9 gravity	1.40
41 to 41.9 gravity	1.43
42 to 42.9 gravity	1.46
43 to 43.9 gravity	1.49
44 to 44.9 gravity	1.52
45 to 45.9 gravity	1.55
46 to 46.9 gravity	1.58
47 to 47.9 gravity	1.61
48 to 48.9 gravity	1.64
49 to 49.9 gravity	1.67
50 to 50.9 gravity	1.70
51 to 51.9 gravity	1.73
42 and above	1.76

*Magnolia Petroleum Company posts the schedule below on oil below 30 gravity and from 30 gravity up to 31.9. Beginning with 32 to 32.9, Magnolia's posting is the same as that of The Texas Company.

Below 30 gravity	.75
30 to 30.9 gravity	.90
31 to 31.9 gravity	1.05

Corsicana heavy is $1.00 posted by Magnolia.

SOUTH TEXAS

Mirando	1.00

SOMERSET

Grayburg

Below 33 gravity	1.05
33 to 33.9 gravity	1.07
34 to 34.9 gravity	1.09
35 to 35.9 gravity	1.11
36 to 36.9 gravity	1.13
37 to 37.9 gravity	1.15
38 and above	1.17

GULF COAST

Grade "A" all companies	1.20
Gulf Coast Light Oil, below 25	1.15
25 to 25.9 gravity	1.17
26 to 26.9 gravity*	1.19
27 to 27.9 gravity	1.21
28 to 28.9 gravity	1.23
29 to 29.9 gravity	1.25
30 to 30.9 gravity	1.27
31 to 31.9 gravity	1.29
32 to 32.9 gravity	1.31
33 to 33.9 gravity	1.33
34 to 34.9 gravity	1.35
35 to 35.9 gravity	1.37
36 to 36.9 gravity	1.39
37 to 37.9 gravity	1.41
38 to 38.9 gravity	1.43
39 to 39.9 gravity	1.45
40 and above	1.47

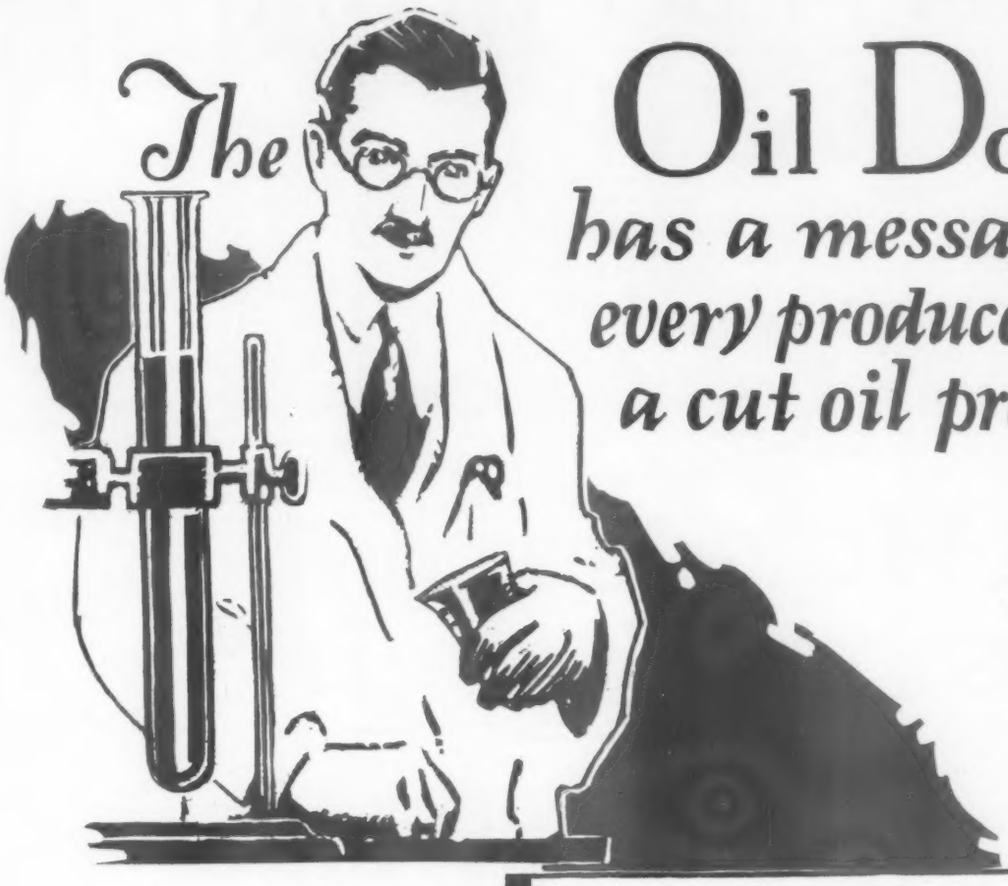
*Humble Oil & Refining Company's postings on Gulf Coast Light stop at 35 to 35.9. Its price on all crudes above 35 to $1.37 per barrel.

Magnolia Petroleum Company's postings stop at 31 to 31.9

CALIFORNIA CRUDE OIL PRICES AT THE WELL

Following are the current prices offered by Standard Oil Company for crude oil at the well: (Price per barrel of 42 gallons in fields indicated.)

Gravity (degrees)	Signal Hill	Seal Beach	Huntington Beach	Inglewood	Olinda-Brea Canon	Athens-Rosecrans Dominguez	Torrance	Richfield	Whittier La Habra	Montebello	Coyotte Hill	Santa Fe Springs	Newhall McKittrick Kern River	Midway Sunset Elk Hills	Buena Vista Hills	Lost Hills	Coalinga	Wheeler
14-14-9	$ .85	$ .85	$ .85	$ .85	$ .85	$ ..	$ .85	$ .85	$ .85	$ .85	$ .85	$ ..	$ .75	$ .75	$ .75	$ .75	$ .75	$ .75
15-15-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
16-16-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
17-17-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
18-18-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
19-19-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75
20-20-9	.85	.85	.85	.85	.85	..	.85	.85	.85	.85	.85	..	..	.77	.77	.77	.76	.76
21-21-9	.86	.86	.86	.86	.86	..	.86	.86	.85	.85	.86	.85	..	.79	.79	.79	.77	.77
22-22-9	.87	.87	.87	.87	.87	..	.87	.87	.85	.85	.87	.85	..	.81	.81	.81	.78	.78
23-23-9	.88	.88	.88	.88	.88	..	.88	.88	..	.85	.88	.85	..	.83	.83	.83	.79	.79
24-24-9	.89	.89	.89	.89	.89	..	.89	.89	..	.85	.89	.85	..	.85	.85	.85	.80	.80
25-25-9	.90	.90	.90	.90	.90	.90	.90	.90	..	.86	.90	.86	..	.87	.87	.87	.81	.81
26-26-9	.92	.92	.92	.92	.92	.92	.92	.92	..	.87	.91	.87	..	.89	.89	.89	.83	.82
27-27-9	.94	.94	.94	.94	.94	.94	.94	.94	..	.88	.92	.88	..	.91	.91	.91	.85	.83
28-28-9	.96	.96	.96	.96	.96	.96	.96	.96	..	.89	.93	.89	..	.93	.93	.93	.87	..
29-29-9	.98	.98	.98	..	.98	.98	..	1.00	..	.91	.95	.93	..	.99	.99	.99	.91	..
30-30-9	1.00	1.00	1.00	..	1.00	1.00	..	..	..	..	..	.95	..	1.02	1.02	1.02	.93	..
31-31-9	1.03	1.03	1.03	..	..	1.03	..	..	..	..	..	.97	..	1.05	1.05	1.05	.95	..
32-32-9	1.06	1.06	1.06	..	..	1.06	..	..	..	..	..	.99	..	1.08	1.08	1.08	.97	..
33-33-9	..	..	..	..	..	1.09	..	..	..	..	..	1.01	..	..	..	1.11	.99	..
34-34-9	..	..	..	..	..	1.12	..	..	..	..	..	1.03	..	..	..	..	1.01	..
35-35-9	..	..	..	..	..	1.15	..	..	..	..	..	1.06	..	..	..	..	..	..
36-36-9	..	..	..	..	..	1.18	..	..	..	..	..	1.09	..	..	..	..	..	..
37-37-9	..	..	..	..	..	1.21	..	..	..	..	..	1.12	..	..	..	..	..	..
38-38-9	..	..	..	..	..	1.24	..	..	..	..	..	1.15	..	..	..	..	..	..
39-39-9	..	..	..	..	..	1.27	..	..	..	..	..	..	..	..	..	..	..	..
40-40-9	..	..	..	..	..	1.30	..	..	..	..	..	..	..	..	..	..	..	..
41-41-9	..	..	..	..	..	1.33	..	..	..	..	..	..	..	..	..	..	..	..
42-42-9	..	..	..	..	..	1.36	..											



The Oil Doctor has a message for every producer with a cut oil problem

The Oil Doctor has helped countless other producers—has shown them the way to increased profits through the elimination of their cut oil problems. He has a vital message for you—a message that means lowered costs and increased earnings if your production tests higher than pipe line requirements. It is all given in detail in our booklet "The Electrical Process for the Dehydration of Crude Oil Emulsions." Send for your copy, now. No obligation, of course, but there's a fund of data and information, valuable to producers of crude petroleum.

PETROLEUM RECTIFYING COMPANY of CALIFORNIA

Security Title Insurance Bldg. 530 West 6th Street. Los Angeles, Calif.

Petroleum Bldg. Houston, Texas

PETRECO

	June 20 1928
The Texas Company	
MARKHAM	
All grades	1.00
LULING	
All grades	1.00
PANHANDLE	
GRAY COUNTY	
(Humble Oil and Refining Company, Magnolia Petroleum Company and Gulf Refining Company)	
Below 27 gravity	.60
27 to 27.9 gravity	.65
28 to 28.9 gravity	.70
29 to 29.9 gravity	.75
30 to 30.9 gravity	.80
31 to 31.9 gravity	.85
32 to 32.9 gravity	.90
33 to 33.9 gravity	.93
34 to 34.9 gravity	.96
35 to 35.9 gravity	.99
36 to 36.9 gravity	1.02
37 to 37.9 gravity	1.05
38 to 38.9 gravity	1.08
39 to 39.9 gravity	1.11
40 to 40.9 gravity	1.14
41 to 41.9 gravity	1.17
42 to 42.9 gravity	1.20
43 to 43.9 gravity	1.23
44 and above	1.26
WHEELER COUNTY	
(Humble Oil and Refining Company and Magnolia Petroleum Company)	
Below 29 gravity	.60
29 to 29.9 gravity	.65
30 to 30.9 gravity	.70
31 to 31.9 gravity	.75
32 to 32.9 gravity	.80
33 to 33.9 gravity	.83
34 to 34.9 gravity	.86
35 to 35.9 gravity	.89
36 to 36.9 gravity	.92
37 to 37.9 gravity	.95
38 to 38.9 gravity	.98
39 to 39.9 gravity	1.01
40 to 40.9 gravity	1.04
41 to 41.9 gravity	1.07
42 to 42.9 gravity	1.10
43 to 43.9 gravity	1.13
44 and above	1.16
CARSON-HUTCHINSON COUNTIES	
(Humble Oil and Refining Company, Magnolia Petroleum Company and Gulf Refining Company)	
Below 31 gravity	.60
31 to 31.9 gravity	.65
32 to 32.9 gravity	.70
33 to 33.9 gravity	.73
34 to 34.9 gravity	.76
35 to 35.9 gravity	.79
36 to 36.9 gravity	.82
37 to 37.9 gravity	.85
38 to 38.9 gravity	.88
39 to 39.9 gravity	.91
40 to 40.9 gravity	.94
41 to 41.9 gravity	.97
42 to 42.9 gravity	1.00
43 to 43.9 gravity	1.03
44 and above	1.06
WEST TEXAS	
(Humble, Gulf, Magnolia, The Marland Company and Southern Crude Oil Purchasing Company)*	
Crane- Upton, Crockett, Pecos and Winkler Counties, all grades	.60
*Gulf does not post in Winkler County; Magnolia posts only in Crane and Upton Counties; The Marland Company, post only in Crane, Upton and Crockett Counties; Southern posts only in Crane, Upton and Winkler Counties.	
(Magnolia Petroleum Company)	
Mitchell County	$ .80
Howard-Glasscock County (shallow)	.80
Howard-Glasscock County (deep)	.60
Col-Tex Refining Company	
Howard and Mitchell Counties	$ .80
WYOMING-MONTANA	
Wyoming	
Byron	1.33
Ferris	1.60
Elk Basin	1.33
Grass Creek	1.33
Rock Creek	1.25
Lost Soldier	.95
Lance Creek	1.33
Mule Creek	1.10
Notches	.65
Big Muddy	1.25
Osage	1.33
Hamilton Dome	.85
Pilot Butte	1.75
Torchlight-Greybull	1.33
Lander	.80
Simpson Ridge	.80
Rex Lake	1.10
South Casper Creek-Poison Spider	1.00
Salt Creek	
Midwest Refining Company	
29 to 29.9 gravity	1.14
30 to 30.9 gravity	1.16
31 to 31.9 gravity	1.18
32 to 32.9 gravity	1.20
33 to 33.9 gravity	1.22
34 to 34.9 gravity	1.24
35 to 35.9 gravity	1.26
36 to 36.9 gravity	1.28
37 and above	1.30
MONTANA	
Sunburst	$1.65
Cat Creek	1.33
Lake Basin	2.20
NEW MEXICO	
Artesia	1.00
Hogback	1.38
CANADA	
Oil Springs	2.02
Petrolia	1.95
LOUISIANA-ARKANSAS	
(All Companies)*	
Homer, Haynesville, Caddo, El Dorado, De Soto and Crichton and Cotton Valley**	
Below 28 gravity	.91
28 to 28.9 gravity	.96
29 to 29.9 gravity	1.01
30 to 30.9 gravity	1.06
31 to 31.9 gravity	1.11
32 to 32.9 gravity	1.16
33 to 33.9 gravity	1.19
34 to 34.9 gravity	1.22
35 to 35.9 gravity	1.25
36 to 36.9 gravity	1.28
37 to 37.9 gravity	1.31
38 to 38.9 gravity	1.34
39 to 39.9 gravity	1.37
40 to 40.9 gravity	1.40
41 to 41.9 gravity	1.43
42 to 42.9 gravity	1.46
43 to 43.9 gravity	1.49
44 to 44.9 gravity	1.52
45 to 45.9 gravity	1.55
46 to 46.9 gravity	1.58
47 to 47.9 gravity	1.61
48 to 48.9 gravity	1.64
49 to 49.9 gravity	1.67
50 to 50.9 gravity	1.70
51 to 51.9 gravity	1.73
52 and above	1.76

*Shreveport-Eldorado's postings stop at above 40 gravity.

**Below 36 gravity, the posting on Cotton Valley is 75 cents. From 36 to 52 and above the regular gravity schedule is followed.

	June 20 1928
STEPHENS	
(All Companies)	
Below 28	.85
28 to 28.9 gravity	.87
29 to 29.9 gravity	.89
30 to 30.9 gravity	.91
31 to 31.9 gravity	.93
32 and above	.95
SMACKOVER	
(All Companies)	
Below 24 gravity	.75
24 and above	.[illegible]
Bellevue	1.25
Jennings	1.15
Vinton	1.30
Edgerly	1.30
Starks Dome	1.30
Urania	.75
Calion	.75

IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

American Petroleum Institute Figures (Barrels of 42 gallons)

	Week End'd June 9	Week End'd June 2
AT ATLANTIC COAST PORTS—		
Baltimore	135,000	158,000
Boston	72,000	77,000
New York	819,000	*680,000
Philadelphia	202,000	377,000
Others	100,000	139,000
Total	1,328,000	1,431,000
Daily average	189,714	204,429
AT GULF COAST PORTS—		
Galveston District	.....	40,000
New Orleans and Baton Rouge	117,000	187,000
Port Arthur and Sabine District	.....	.....
Tampa	.....	.....
Total	117,000	227,000
Daily average	16,714	32,429
AT ALL UNITED STATES PORTS—		
Total	1,445,000	1,658,000
Daily average	206,428	236,858
Daily average four weeks ended	226,449	224,929

*Revised.

RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF COAST PORTS

American Petroleum Institute Figures (Barrels of 42 gallons)

	Week End'd June 9	Week End'd June 2
AT ATLANTIC COAST PORTS		
Baltimore	.....	213,000
Boston	.....	.....
New York	80,000	75,000
Philadelphia	160,000	.....
Others	.....	78,000
Total	240,000	366,000
Daily Average	34,286	52,286
AT GULF COAST PORTS	.....	.....
Daily Average	.....	.....
TOTAL—ATLANTIC AND GULF COAST PORTS	240,000	366,000
Daily Average	34,286	52,286
Daily Averages Four Weeks Ended	49,857	59,964
DISTRIBUTION OF TOTAL CALIFORNIA OIL RECEIPTS IS AS FOLLOWS:		
Crude	.....	78,000
Gasoline	240,000	288,000
Gas Oil	.....	.....
Total	240,000	366,000

*Revised.

International IDECO in International Use

TAKE a swing around the world. Visit all the active oil fields, both here and abroad. See how many wells can be located by their towering IDECOS!—Thousands! This phenomena is not surprising when you remember that *IDECO'S* reputation for year in and year out dependability and economy of upkeep is known wherever oil is found.

Further popularity is due to the policy of considering no sale complete until that derrick is giving its owner 100% satisfaction.

Take the advice of the companies who "play safe" and equip your crews with Ideco Galvanized Structural Steel Derricks. No slow-downs—fireproof—rustproof.

Prompt shipment to all parts of the world from export offices on both the Atlantic and Pacific seaboard.

Branches

Dallas	Allen
Houston	Sasakwa
Mexia	Eldorado
Wichita Falls	Tulsa
Pyote	Tonkawa
Amarillo	Drumright
Borger	Okemah
Corsicana	Seminole
Pampa	Wewoka
Panhandle	Denver
Shreveport	Casper
Oil City	Torrance
Smackover	Los Angeles
Odessa	Taft
Parkersburg	

The largest company devoted exclusively to the manufacture of steel (galvanized) equipment for the oil, gas and artesian industries.

The International Derrick & Equipment Co.

Columbus, Ohio **Torrance, Cal.**

California Representative:
National Supply Co. of California
Export Representation: 74 Trinity Place, New York City
Columbus, Ohio. Los Angeles and San Francisco

INTERNATIONAL STEEL IDECO DERRICKS (GALVANIZED)

513

United States Daily Average Production

Figures below are taken from the complete revised estimates of the AMERICAN PETROLEUM INSTITUTE except for the current week, which are advance estimates issued by the A. P. I. and are subject to revision:

1927	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Daily Ave.	United States Total
January	598,500	117,200	466,400	173,900	52,900	131,550	107,850	84,450	653,450	2,386,200	73,972,150
February	693,350	116,250	479,800	154,600	52,800	128,200	107,150	85,300	642,700	2,460,150	68,884,300
March	710,350	116,100	475,000	154,750	51,450	124,500	104,400	87,600	640,850	2,465,000	76,414,900
April	723,700	115,400	477,300	155,100	50,500	113,350	108,000	89,350	644,550	2,477,250	74,317,750
May	742,200	114,600	488,700	151,300	47,450	112,700	114,000	89,300	633,550	2,493,800	77,307,700
June	768,600	112,200	480,800	151,650	49,150	112,450	111,850	86,050	638,550	2,511,300	75,338,900
July	846,750	107,750	475,800	142,950	56,200	109,900	111,800	86,950	620,700	2,558,800	79,322,300
August	832,900	105,100	483,450	139,350	56,950	104,750	114,600	80,750	621,450	2,539,300	78,717,850
September	797,450	105,200	493,750	142,900	53,450	101,350	110,800	74,500	637,250	2,516,650	75,498,900
October	782,300	105,100	497,900	138,400	51,300	100,450	113,600	73,250	629,000	2,491,300	77,230,000
November	766,900	106,650	501,750	138,100	49,400	97,850	114,900	75,050	623,850	2,474,450	74,233,500
December	720,700	106,150	531,650	138,500	47,200	94,950	111,250	77,150	624,600	2,452,150	76,017,050
1928											
January	675,450	108,300	523,300	125,450	45,250	90,050	109,600	77,000	617,100	2,371,500	73,516,500
February	664,450	110,550	538,750	115,800	45,300	88,250	104,850	75,550	614,750	2,358,.50	68,388,850
March	646,850	112,250	575,850	119,900	44,400	85,600	102,150	78,700	617,450	2,383,150	73,877,650
April	620,450	112,150	617,850	118,850	46,900	83,450	107,000	78,500	613,550	2,398,700	71,961,100
May	610,100	108,750	561,450	129,850	43,600	91,250	112,100	82,200	630,900	2,370,200	73,476,300
June 2	599,700	107,950	533,450	131,850	42,700	107,050	112,000	89,900	640,800	2,365,400	16,557,800
June 9	596,650	106,550	533,650	139,050	43,250	106,600	110,500	82,750	644,800	2,363,800	16,546,600
June 16	598,950	105,450	536,750	135,650	42,500	106,150	109,000	82,000	642,000	2,358,450	16,509,150
Increase	2,300	.....	3,100	.....	.....	.....	.....	.....	.....	.....	.....
Decrease	.....	1,100	.....	3,400	750	450	1,500	750	2,800	5,350	37,450

TEXAS

(Outside Gulf Coast)

PANHANDLE DISTRICT

	June 16	June 9
Carson County	6,850	7,000
Gray County	2,050	19,200
Hutchinson County	37,050	36,000
Wheeler County	1,050	1,100
Others	150	100
Totals	65,150	63,400

NORTH TEXAS

Archer County	21,250	21,500
Baylor County	....	100
Burkburnett	10,200	10,500
Clay County (Petrolia)	....	550
Electra	13,300	13,200
Iowa Park-KMA	3,800	3,850
Montague and Cooke Cos.	12,000	12,150
Wilbarger	16,500	15,000
Others	650	....
Totals	77,700	76,850

WEST CENTRAL TEXAS

Brown County	12,850	13,050
Callahan County	3,300	3,800
Coleman County	2,600	1,900
Eastland-Desdemona	7,500	7,600
Jack County	1,350	1,300
Palo Pinto County	450	400
Shackelford County	10,200	9,900
Stephens County	7,800	7,850
Throckmorton County	950	1,000
Young County	8,000	7,350
Others	650	600
Totals	55,650	54,750

WEST TEXAS

Crane-Upton Counties	67,500	68,000
Crockett County	2,200	2,250
Howard County	4,600	4,500
Jones County	1,300	1,350
Mitchell-Scurry Cos.	3,000	2,950
Pecos County	5,200	53,000
Reagan County	17,700	17,500
Winkler County	143,200	143,000
Others	1,750	1,850
Totals	293,250	294,400

EAST CENTRAL TEXAS

Corsicana-Powell	11,000	11,100
Currie	500	500
Mexia	6,700	6,850
Nigger Creek	1,250	1,250
Richland	500	500
Wortham	1,900	1,850
Totals	21,850	22,050

SOUTHWEST TEXAS

Dale	1,300	1,050
Laredo District	6,000	5,700
Luling	13,650	13,050
Lytton Springs	1,100	1,300
Somerset	700	700
Others	400	400
Totals	23,150	22,200
T'tl Tex. (Outside Gulf Coast)	536,750	533,650

TEXAS GULF COAST

Barbers Hill	700	700
Batson	1,000	1,400
Big Creek	1,450	1,400
Blue Ridge	5,850	5,850
Boling	2,500	2,650
Damon Mound	850	850
Goose Creek	7,100	7,200
Hull	11,600	12,050
Humble	1,500	1,100
Orange County	4,250	4,400
Pierce Junction	11,000	11,950
Saratoga	1,100	1,100
Sour Lake	3,400	3,400
South Liberty	5,000	4,350
Spindle Top	40,050	41,950
West Columbia	8,400	7,950
Others	1,750	1,700
Totals	107,500	110,000
Texas Total	644,250	643,650

OKLAHOMA

North Braman	2,900	2,900
South Braman	1,500	1,550
Blackwell	3,400	3,400
Hubbard	2,750	2,850
Thomas	1,250	1,350
Tonkawa	14,100	14,350
Garber	8,500	8,700
Burbank	32,100	32,750
Osage (outside Burbank)	28,300	28,500
Watchorn	700	700
Cushing	20,000	20,050
Yale Jennings	8,950	9,000
Davenport	2,100	2,000
Bristow Slick	22,450	22,650
North Okmulgee	15,350	15,400
Lyons Deaner	6,500	6,550
Stroud	1,100	1,050
Cromwell	9,750	9,750
Papoose	4,250	4,400
Wewoka	6,550	6,550
Seminole	51,300	52,250
Bowlegs	62,700	62,550
Searight	13,850	14,700
Little River	43,750	44,500
Earlsboro	87,850	90,000
Duncan District	6,950	6,950
Graham	5,700	5,700
Fox	1,700	1,700
Healdton	13,900	13,950
Hewitt	9,300	9,300
Scholem Alechem	14,900	15,000
Others	94,550	85,600
Totals	598,950	596,650

CALIFORNIA

Santa Fe Springs	36,000	36,000
Long Beach	200,000	198,500
Huntington Beach	54,500	55,000
Torrance	17,500	18,000
Dominguez	12,000	12,000
Rosecrans	6,000	6,000
Inglewood	29,000	29,000
Midway-Sunset	70,500	73,500
Ventura Avenue	49,000	47,500
Seal Beach	36,500	37,500
Others	131,000	131,800
Totals	642,000	644,800

ARKANSAS

El Dorado	5,300	5,350
Champagnolle	30,100	28,000
Smackover Light	7,600	7,850
Smackover Heavy	58,200	60,400
Stephens	1,050	1,050
Nevada	1,700	1,700
Lisbon	2,100	2,150
Others	100	100
Totals	106,150	106,600

KANSAS

Greenwood County	29,000	29,200
Florence Covert	1,350	1,400
Peabody-Ebling	3,600	3,600
Eldorado-Towanda	14,000	14,000
Augusta-Fox Bush	4,050	4,050
Rainbow Bend	1,600	1,600
Russell	3,500	3,500
Churchill	11,700	12,050
Oxford	11,950	12,400
Others	24,700	24,750
Totals	105,450	106,550

NORTH LOUISIANA

Homer	4,400	4,400
Haynesville	6,300	6,300
Caddo Light	9,650	9,600
Caddo Heavy	3,300	3,300
DeSoto-Red River	4,200	4,200
Elm Grove	550	550
Bellevue	900	900
Cotton Valley Light	1,300	1,550
Cotton Valley Heavy	4,100	4,150
Urania	7,200	7,700
Pleasant Hill	600	600
Totals North Louisiana	42,500	43,250

LOUISIANA GULF COAST

Edgerly	1,250	950
Evangeline	1,000	900
Lockport	4,000	4,050
Vinton	4,700	4,650
Sorrento	2,100	2,000
East Hackberry	5,450	5,150
Sweet Lake	3,800	3,900
Bayou Boullion	700	650
Sulphur Dome	4,900	6,500
Others	250	300
Total Louisiana Gulf Coast	28,150	29,050
Louisiana Total	70,650	72,300

MOUNTAIN STATES

WYOMING

Salt Creek	43,050	43,250
Grass Creek	2,500	2,500
Elk Basin	1,000	1,150
Big Muddy	2,650	2,600
Lost Soldier	4,300	4,300
Rock River	600	2,650
Lance Creek	650	650
Others	6,700	6,300
Totals	61,450	63,400

MONTANA

Cat Creek	1,750	1,750
Sunburst	8,800	8,800
Others	150	150
Totals	10,700	10,700

COLORADO

Moffats (Craig)	1,100	1,000
Fort Collins	2,500	2,700
Florence	1,100	1,200
Others	2,700	2,100
Totals	7,400	7,000

NEW MEXICO

Table Mesa	350	....
Artesia	1,250	1,250
Hogback	200	200
Rattlesnake	450	....
Totals	2,450	1,650
Total Mountain States	82,000	82,750

EASTERN STATES

(Including Ill., Ind., Ohio, W. Va., Pa., Ky., and N. Y.)	109,000	110,500

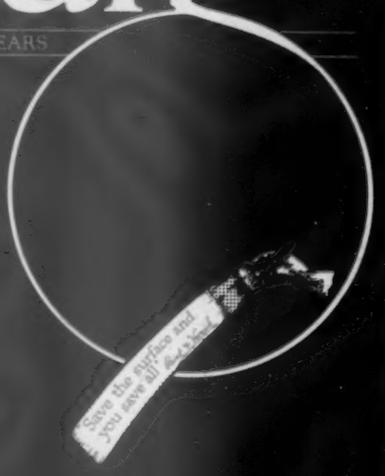
PRODUCTION SUMMARY

East of Rockies	1,634,450	1,636,250
United States Total	2,358,450	2,363,800

Parkersburg

HAS SERVED THE OIL FIELDS OF THE WORLD FOR THIRTY-ONE YEARS

Aluminum Paint *for* Steel



PAINT is primarily used for protection—to protect the surface against the elements. To what extent, and how long this protection is assured, depends upon the quality of the paint.

After an exhaustive research Parkersburg standardized on Aluminum Paint. In actual tests, this paint proved to be a better oil field paint, and to give better protection than any other paint. It provides a flake coating of Aluminum Metal together with a coating of paint.

The outstanding advantages of Aluminum Paint are—its ability to minimize evaporation by reflecting the sun's heat, instead of absorbing the heat rays, and the superior protection it offers against corrosion of metal surfaces.

Parkersburg Aluminum Painted All-Steel Derricks, Tanks and other Steel Equipment, are protected against the elements by this coat of ***Metallic Aluminum***, a protection that adds years to the life of the equipment, lowers derrick depreciation, reduces oil evaporation and checks deterioration.

When you buy Parkersburg Aluminum Painted Steel Equipment, you buy products that are manufactured on a quality basis, and protected by the latest coating process developed for combating rust and corrosion—Aluminum Paint.

Aluminum paint is opaque—and has a high reflectivity for light. Because of this the temperature of the paint, and of the material underneath, remains substantially lower than would be the case with other paints.

Parkersburg Products

Steel Derricks & Steel Crown Blocks	■	Rig Irons (A.P.I. Standard)	■
Chain Driven Sand Reels & Bailing Reels	■	Portable Drilling Machines (Wood & All-Steel)	■
Steel Wheels	■	Bolted Steel Tanks	■
All-Steel Standard Rigs	■	Miscellaneous Drilling Equipment	■

Check the equipment in which you are interested, tear out and return this page, with your name and address, to us, and we will send you complete information on the items checked.

The
PARKERSBURG RIG & REEL COMPANY
Executive Offices & Main Plant, Parkersburg, W. Va., U. S. A.
Sales Offices Maintained and Stocks Carried in Every Producing Field

PARKERSBURG EQUIPMENT THE STANDARD FOR COMPARISON THE WORLD OVER

Say you saw it in The OIL WEEKLY

Summary of Field Operations for May, 1928

EASTERN STATES

	Completions	Producers	Gas Wells	Failures	Initial Prod.
West Virginia	90	18	52	20	239
Ohio	100	61	22	17	2,403
New York	15	13	..	2	37
Illinois	10	3	1	6	47
Michigan	8	5	1	2	590
Tennessee	8	6	..	2	495
Indiana	16	5	2	9	131
Pennsylvania	80	59	13	8	312
Kentucky	120	71	4	45	3,854
Totals	447	241	95	111	8,108

WEST VIRGINIA

Calhoun	10	3	3	4	27
Boone	9	..	8	1	.....
Roane	10	2	7	1	15
Ritchie	9	3	4	2	9
Kanawha	4	2	2	..	4
Wirt	2	1	..	1	2
Tyler	1	..	1	..	.....
Cabell	4	..	4	..	.....
Wetzel	4	1	..	3	150
Lincoln	4	..	4	..	.....
Mingo	1	..	1	..	.....
Marion	3	..	3	..	.....
Lewis	8	..	7	1	.....
Jackson	1	..	..	1	.....
Gilmer	2	..	1	1	.....
Clay	1	1	..	..	15
Wood	1	..	..	1	.....
Braxton	2	..	2	..	.....
Doddridge	3	..	1	2	.....
Pleasants	8	5	1	2	17
Monongalia	2	..	2	..	.....
Harrison	1	..	1	..	.....
Totals	90	18	52	20	239

OHIO

Northwestern—					
Wood	2	1	..	1	40
Shelby	2	1	..	1	35
Seneca	3	2	..	1	480
Allen	3	3	..	..	60
Hancock	1	..	1	..	.....
Auglaize	1	..	..	1	.....
Southwestern—					
Washington	11	6	1	4	12
Monroe	4	3	..	1	79
Noble	5	4	1	..	16
Belmont	3	1	2	..	2
Jefferson	4	2	..	2	30
Morgan	1	..	1	..	.....
Central—					
Licking	14	12	1	1	111
Perry	13	9	3	1	1,002
Cuyahoga	5	3	1	1	105
Fairfield	1	1	..	..	10
Holmes	1	..	1	..	.....
Athens	8	3	5	..	13
Guernsey	3	3	..	..	175
Hocking	5	4	..	1	84
Muskingum	1	..	..	1	.....
Ashland	2	..	2	..	.....
Medina	1	..	..	1	.....
Coshocton	1	1	..	..	143
Wayne	1	..	1	..	.....
Summit	1	..	1	..	.....
Meigs	3	2	1	..	6
Totals	100	61	22	17	2,403

NEW YORK

Allegany	15	13	..	2	37

ILLINOIS

Wabash	5	1	..	4	10
Lawrence	1	1	..	..	35
Clark	2	..	..	2	.....
Crawford	2	1	1	..	2
Totals	10	3	1	6	47

MICHIGAN

Muskegon	6	5	..	1	590
Mason	1	..	1	..	.....
Ottawa	1	..	..	1	.....
Totals	8	5	1	2	590

TENNESSEE

Clay	7	5	..	2	395
Jackson	1	1	..	..	100
Totals	8	6	..	2	495

INDIANA

Field—	Completions	Producers	Gas Wells	Failures	Initial Prod.
Gibson	6	2	1	3	105
Pike	3	1	..	2	10
Sullivan	1	..	..	1	.....
Adams	1	1	..	..	8
Randolph	1	..	..	1	.....
Daviess	1	1	..	..	8
Rush	1	..	1	..	.....
Vigo	1	..	..	1	.....
Spencer	1	..	..	1	.....
Totals	16	5	2	9	131

PENNSYLVANIA

Greene	7	..	4	3	.....
Washington	2	1	..	1	5
Allegheny	3	1	1	1	3
Bradford	48	47	..	1	217
Butler	8	2	5	1	6
Venango	8	4	3	1	9
Center-Middle	3	3	..	..	12
Warren	1	1	..	..	60
Totals	80	59	13	8	312

KENTUCKY

Barren	24	11	..	13	148
Warren	5	3	..	2	13
Ohio	42	32	..	10	2,671
Daviess	23	13	1	9	857
Calhoun	1	..	..	1	.....
Union	1	..	1	..	.....
Hancock	5	3	..	2	65
Wayne	3	2	..	1	10
Estill	2	1	..	1	3
Wolfe	2	2	..	..	50
Johnson-Magoffin	1	1	..	..	20
Elliott	1	1	..	..	10
Clinton	1	1	..	..	5
Cumberland- Monroe	1	..	..	1	.....
Allen	4	1	..	3	2
Webster	2	..	2	..	.....
McLean	2	..	..	2	.....
Totals	120	71	4	45	3,854

MOUNTAIN STATES

WYOMING

Four Bear	1	1	..	..	40
Oregon Basin	4	4	..	..	988
Salt Creek	2	2	..	..	106
Vinta County	1	1	..	..	100
Spindle Top	1	1	..	..	200
Totals	9	9	..	..	1,434

MONTANA

Bannatyne	1	..	..	1	.....
Kevin-Sunburst	17	15	1	1	12,930
Pondera	2	2	..	..	50
Totals	20	17	1	2	12,980

COLORADO

Florence	3	3	..	..	125
Fremont County	1	1	..	..	100
Rangely	1	..	..	1	.....
Tow Creek	2	2	..	..	230
Wellington Dome	1	1	..	..	427
Totals	8	7	..	1	882

MOUNTAIN STATES
Recapitulation

Wyoming	9	9	..	..	1,434
Montana	20	17	1	2	12,980
Colorado	8	7	..	1	882
Totals	37	33	1	3	15,296

NEW MEXICO

Artesia	37,800
Table Mesa	2,700
Hogback	13,300
Rattlesnake	12,200
Others	6,200
Totals	72,200
Total Mountain States	2,547,000

MONTANA

Cat Creek	54,500
Kevin-Sunburst	289,000
Others	4,650
Totals	348,150

WYOMING

Field—	Barrels
Salt Creek	1,289,100
Grass Creek	77,650
Elk Basin	34,900
Big Muddy	82,400
Lost Soldier	145,500
Rock River	79,350
Lance Creek	22,650
Others	192,250
Totals	1,923,800

COLORADO

Moffats (Craig)	43,300
Fort Collins	85,000
Florence	40,550
Others	34,000
Totals	202,850

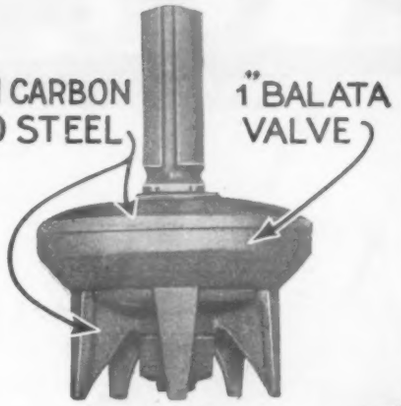
OKLAHOMA

	Completions	Oil Wells	Gas Wells	Failures	Prod. Bbls.
Beaver	1	..	..	1	.....
Beckham	2	..	1	1	.....
Caddo	2	..	..	2	.....
Carter	12	10	..	2	1,854
Cimarron	2	..	..	2	.....
Comanche	1	..	..	1	.....
Cotton	3	..	1	2	.....
Creek	36	14	5	17	1,174
Garfield	1	..	1	..	.....
Garvin	2	..	..	2	.....
Grady	10	1	8	1	110
Grant	1	..	1	..	.....
Hughes	3	2	..	1	156
Jefferson	6	3	1	2	125
Kay	13	1	2	10	250
Lincoln	3	1	..	2	125
Logan	7	2	2	3	167
McIntosh	1	..	..	1	.....
Muskogee	39	10	4	25	360
Noble	1	..	..	1	.....
Okfuskee	7	3	1	3	647
Okmulgee	20	8	2	10	126
Osage	20	16	2	2	1,081
Pawnee	7	5	..	2	63
Payne	2	1	..	1	20
Pittsburg	1	..	1	..	.....
Pontotoc	7	5	..	2	1,897
Pottawatomie	8	6	1	1	6,681
Seminole	49	39	2	8	66,398
Stephens	24	15	3	6	3,718
Texas	1	..	..	1	.....
Tulsa	10	3	1	6	75
Waggoner	4	..	1	3	.....
Totals	306	145	40	121	85,027

OKLAHOMA PRODUCTION SUMMARY

Field—	Barrels
North Braman	94,450
South Braman	50,000
Blackwell	112,150
Hubbard	89,650
Thomas	43,750
Tonkawa	427,700
Garber	268,050
Burbank	1,066,450
Osage	890,300
Watchorn	24,550
Cushing	628,800
Yale-Jennings	280,550
Davenport	62,500
Bristow- Slick	734,400
North Okmulgee	480,000
Lyons-Deaner	203,650
Stroud	32,450
Cromwell	300,600
Papoose	138,100
Wewoka	217,150
Seminole	1,647,750
Searight	457,950
Earlsboro	2,912,500
Duncan District	207,900
Graham	179,550
Healdton	431,850
Scholem-Alechem	428,100
Bowlegs	2,058,600
Little River	1,457,900
Fox	52,700
Hewitt	280,000
Others	2,653,550
Totals	18,913,600

SECO VALVE



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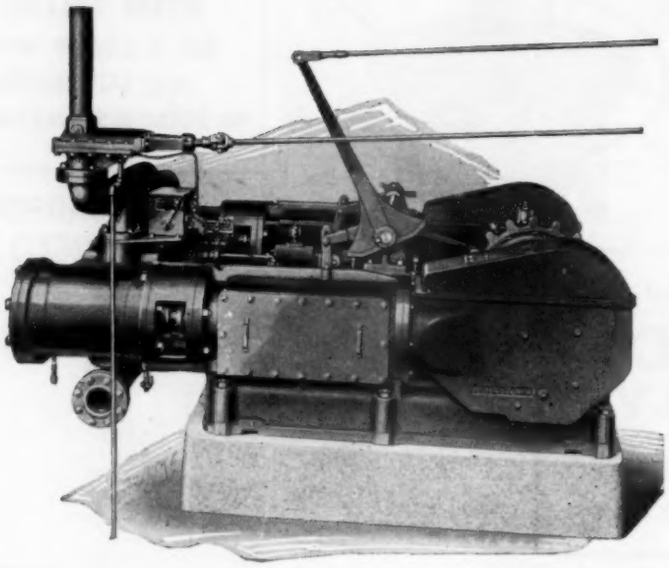

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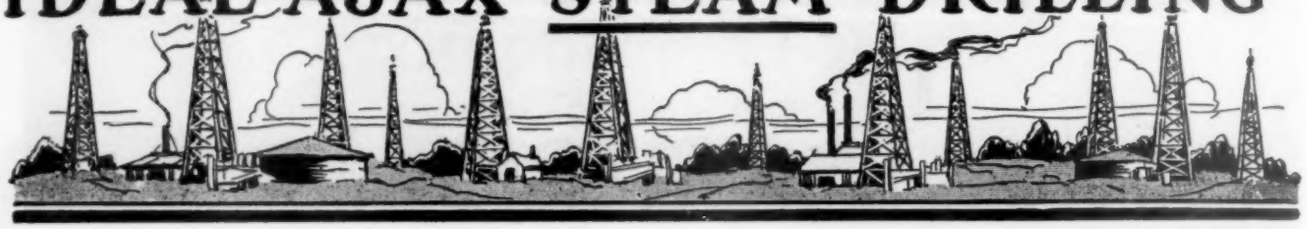

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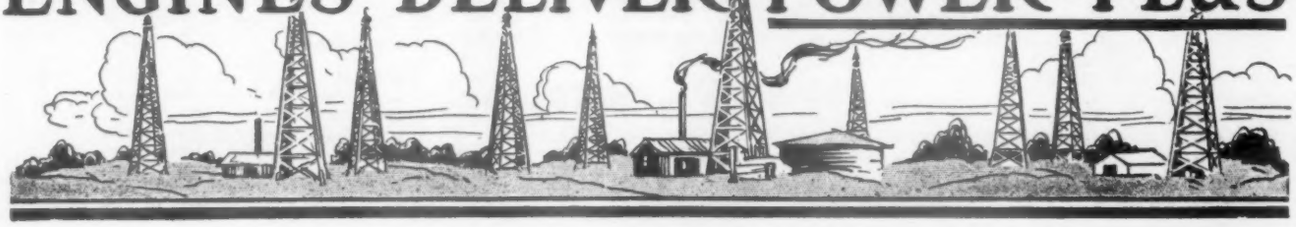

KANSAS

	Completions	Oil Wells	Gas Wells	Failures	Prod. Bbls.
Butler	6	4	..	2	410
Chase	1	..	..	1	.....
Cowley	7	3	1	3	126
Dickinson	2	..	..	2	.....
Elk	4	2	..	2	145
Greenwood	18	10	2	6	1,450
Marion	5	4	..	1	455
Morris	1	..	..	1	.....
Russell	3	2	..	1	200
Stafford	1	..	..	1	.....
Sumner	12	11	..	1	2,426
Woodson	2	..	..	2	.....
Totals	62	36	3	23	5,212

KANSAS PRODUCTION SUMMARY

Field—	Barrels
Greenwood County	912,650
Florence-Covert	42,700
Peabody-Elbing	112,200
Eldorado-Towanda	435,900
Augusta-Fox-Bush	125,550
Rainbow Bend	50,550
Russell	104,550
Churchill	365,700
Oxford	452,350
Others	769,350
Totals	3,371,500

CALIFORNIA

Athens-Rosecrans	..	..	..	..	.....
Alamitos Heights	..	..	..	..	.....
Baldwin Hills-Inglewood	..	..	..	..	.....
Brea-Richfield	..	..	..	..	.....
Cat Canyon	1	1	..	..	150
Dominguez	..	..	..	..	.....
Elk Hills	..	..	..	..	.....
Goleta	1	..	..	1	.....
Huntington Beach	3	2	..	1	350
Kern Front	2	2	..	..	265
Long Beach	29	29	..	..	46,650
Midway	2	2	..	..	205
Poso Creek	1	..	..	1	.....
Rincon	5	5	..	..	2,825
Santa Fe Spgs.	1	1	..	..	225
Round Mountain	1	1	..	..	950
Seal Beach	..	..	..	..	.....
South Mountain	1	1	..	..	100
Sunset	..	..	..	..	.....
Torrance	..	..	..	..	.....
Ventura Avenue	1	1	..	..	1,100
Wheeler Ridge	1	1	..	..	110
Wildcats	8	1	..	7	1,000
Totals	57	47	..	10	53,930

CALIFORNIA PRODUCTION SUMMARY

Field—	Barrels
Santa Fe Springs	1,128,000
Long Beach	5,664,000
Huntington Beach	1,726,500
Torrance	567,500
Dominguez	374,500
Rosecrans	188,500
Inglewood	899,000
Midway-Sunset	2,278,500
Ventura Avenue	1,477,000
Seal Beach	1,167,500
Others	4,086,400
Totals	19,557,400

ARKANSAS

Bradley	..	..	..	..	...	.....
Champagnolle	..	..	..	..	...	388,700
El Dorado	..	..	..	..	...	164,200
Nevada	..	..	..	..	...	58,600
Lisbon	..	..	..	..	...	54,850
Smackover	10	10	..	..	5,671	2,127,300
Stephens	..	..	..	..	...	32,550
Others	..	..	..	..	...	3,100
Wildcats	5	..	..	5	...	.....
Totals	15	10	..	5	5,671	2,829,300

TEXAS

EAST TEXAS

Anderson County	..	..	..	..	...	.....
Harrison County	1	..	1-a	..	...	.....
Panola County	..	..	..	..	...	.....
Wildcats	1	..	..	1	...	.....
Totals	2	..	1	1	...	.....

a—Includes 200,000 feet of gas.

TEXAS Recapitulation

Field—	Completions	Producers	Gas Wells	Failures	Initial Prod.	Monthly Prod.
East Texas	2	..	1	1	.....	.....
East-Central Texas	1	..	..	1	.....	708,350
N. Texas	127	64	..	63	4,715	2,326,900
Sw. Texas.	18	9	2	7	5,400	714,800
Texas Gulf Coast	63	33	1	29	20,973	3,467,950
Texas Panhandle	27	12	9	6	1,105	2,058,450
West Texas	67	51	..	16	196,170	9,899,950
Central-West Texas	210	78	11	121	7,516	1,696,500
Totals	515	247	24	244	235,879	20,872,900

CENTRAL-WEST TEXAS

Brown Co.	59	24	1-a	34	2,518	395,350
Callahan Co.	7	1	..	6	10	115,400
Coleman Co	18	4	2-b	12	930	52,850
Eastland	16	3	3-c	10	985	234,300
Jack County	8	2	..	6	155	43,000
Palo Pinto	1	..	1-d	..	...	13,000
Parker Co.	1	..	..	1	...	.....
Shackelford	20	12	1-e	7	1,105	304,200
Stephens	7	1	2-f	4	30	251,450
Throckmorton	..	..	..	..	...	31,000
Young Co.	73	31	1	41	1,783	234,100
Others	..	..	..	..	...	21,850
Totals	210	78	11	121	7,516	1,696,500

a—Includes 500,000 feet of gas.
b—Includes 20,000,000 feet of gas.
c—Includes 28,500,000 feet of gas.
d—Includes 6,000,000 feet of gas.
e—Includes 5,000,000 feet of gas.
f—Includes 6,000,000 feet of gas.

TEXAS PANHANDLE

Armstr'g Co.	1	..	..	1	.....	.....
Carson Co.	4	2	2a	..	335	220,200
Gray Co.	18	7	6b	5	465	576,950
Hutchinson Co.	3	3	..	..	305	1,222,100
Wheeler Co.	1	..	1c	..	.....	33,050
Others	..	..	..	..	.....	6,150
Totals	27	12	9	6	1,105	2,058,450

a—Includes 72,000,000 feet of gas.
b—Includes 146,000,000 feet of gas.
c—Includes 35,000,000 feet of gas.

NORTH TEXAS

Archer Co.	42	19	..	23	975	691,200
Baylor Co.	..	..	..	..	.....	3,100
Burkburnett	3	1	..	2	25	343,750
Collin Co.	1	..	..	1	.....	.....
Clay Co.	2	..	..	2	.....	16,100
Cooke Co.	6	1	..	5	15	(a)
Electra	19	10	..	9	551	396,100
Grayson County	1	..	..	1	...	.....
Iowa Park K-M-A	20	9	..	11	299	112,950
Knox County	1	..	..	1	...	.....
Montague County	8	7	..	1	175	375,500
Wilbarger	24	17	..	7	2,675	388,200
Totals	127	64	..	63	4,715	2,326,900

a—Production included under Montague County.

WEST TEXAS

Crane Co.	..	..	..	..	...	2,159,900
Crockett Co.	..	..	..	..	...	71,900
Howard Co.	4	3	..	1	3,070	131,850
Jones Co.	1	1	..	..	15	40,550
Mitchell Co.	2	1	..	1	80	93,500
Pecos Co.	10	10	..	..	67,345	1,600,650
Reagan Co.	..	..	..	..	...	555,150
Upton Co.	1	1	..	..	225	(a)
Winkler Co.	34	34	..	..	125,335	5,191,200
Others	..	..	..	..	...	55,250
Wildcats	15	1	..	14	100	.....
Totals	67	51	..	16	196,170	9,899,950

a—Production included in Crane County.

EAST CENTRAL TEXAS

Cosicana-Powell	..	..	..	..	...	353,200
Currie	..	..	..	..	...	16,550
Mexia	..	..	..	..	...	221,650
Nigger Creek and Cedar Creek	..	..	..	..	...	39,950
Richland	..	..	..	..	...	16,200
Wortham	..	..	..	..	...	60,800
Wildcats	1	..	..	1	...	.....
Totals	1	..	..	1	...	708,350

SOUTHWEST TEXAS

Field—	Completions	Producers	Gas Wells	Failures	Initial Prod.	Monthly Prod.
Caldwell Co.	1	1	..	..	2,500	.....
Dale	4	3	..	1	200	37,900
Duval County	4	..	2a	2	...	.....
Jim Hogg County	1	..	..	1	...	.....
Laredo Dist.	6	5	..	1	2,700	184,200
Luling	..	..	..	..	...	414,600
Lytton Springs	..	..	..	..	...	44,000
Somerset	..	..	..	..	...	21,700
Val Verde County	1	..	..	1	...	.....
Others	..	..	..	..	...	12,400
Zapata County	1	..	..	1	...	.....
Wildcats	..	..	..	..	...	.....
Totals	18	9	2	7	5,400	714,800

a—Includes 50,000,000 feet of gas.

TEXAS GULF COAST

Barbers Hill	..	..	..	..	...	18,500
Batson	3	2	..	1	80	43,050
Big Creek	2	1	..	1	125	46,150
Blue Ridge	10	8	..	2	6,750	241,400
Boling	..	..	..	..	...	87,900
Damon Mound	..	..	..	..	...	27,750
Goose Creek	4	4	..	..	870	222,000
High Island	1	1	..	..	250	(a)
Hull	6	5	1	..	3,560	377,400
Humble	..	..	..	..	...	32,600
Nash Dome	..	..	..	..	...	(a)
Orange	2	1	..	1	50	136,200
Orchard	..	..	..	..	...	(a)
Pierce Jct.	6	5	..	1	5,450	424,900
Saratoga	2	2	..	..	105	33,250
Sour Lake	1	..	..	1	...	108,500
S. Liberty	1	1	..	..	3,000	119,800
Spindle Top	4	1	..	3	365	1,204,250
W. Columbia	1	1	..	..	150	260,800
Others	..	..	..	..	...	83,500
Wildcats	20	1	..	19	218	.....
Totals	63	33	1	29	20,973	3,467,950

a—Included in "Others."

LOUISIANA

GULF COAST

Bayou Boullion	..	..	..	..	...	15,000
East Hackberry	..	..	..	..	...	111,500
Edgerly	2	1	..	1	...	35,300
Evangeline	1	..	..	1	...	31,350
Lockport	1	1	..	..	115	125,500
Sorrento	..	..	..	..	...	.....
Sulphur	..	..	..	..	...	76,950
Sweet Lake	..	..	..	..	...	.....
Vinton	2	2	..	..	120	145,150
Others	..	..	..	..	...	9,900
Wildcats	9	4	..	5	3,850	.....
Totals	15	8	..	7	4,100	550,650

NORTH LOUISIANA

Beelevue	..	..	..	..	...	32,550
Bossier	10	..	10-a	..	...	.....
Caddo	3	3	..	..	155	421,050
Cotton Valley	..	..	..	..	...	197,250
De Soto	1	..	1-b	..	...	127,350
E. Carroll	1	..	1-c	..	...	.....
Elm Grove	..	..	..	..	...	16,250
Haynesville	..	..	..	..	...	194,350
Homer	..	..	..	..	...	137,100
Morehouse	1	..	1-d	..	...	.....
Ouachita	4	..	4-e	..	...	.....
Pleasant Hill	..	..	..	..	...	18,000
Richland	3	..	3-f	..	...	.....
Sabine	..	..	..	..	...	.....
Union	..	..	..	..	...	.....
Urania	..	..	..	..	...	207,800
Webster	3	..	3-g	..	...	.....
Wildcats	15	..	..	15	...	.....
Totals	41	3	23	15	155	1,351,700
South La.	15	8	..	7	4,100	550,650
La. Total	56	11	23	22	4,255	1,912,350

a—Includes 264,500,000 feet of gas.
b—Includes 2,000,000 feet of gas.
c—Includes 51,000,000 feet of gas.
d—Includes 28,000,000 feet of gas.
e—Includes 15,500,000 feet of gas.
f—Includes 122,000,000 feet of gas.
g—Includes 62,000,000 feet of gas.

more than 25 years practical experience in solving screening problems

goes into every section of THE LAYNE screen

A thorough appreciation, through 25 years' experience in solving screening problems, enters into the making of Layne Screens.

The desire to help increase production and a thorough knowledge of the oil industry prompted the making of the new style Milled Groove Screen.

It has increased production in many instances from 33 1/3 to 100%.

You, too, can increase your production through use of this new type screen.

Write or wire today for complete information

OTHER

THE LAYNE

PRODUCTS

Lead Cone and Canvas Ratchet Packers
Swivels— Pin Packers
Screw-Off Packers
Setting Nipples
Lead Seals

The Layne & Bowler Co.

Houston, Texas

THE LAYNE-NEW YORK CO. 30 Church St., New York
THE LAYNE & BOWLER CORP., Los Angeles Calif.
VICKERS, LIMITED London, England

COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

SUMMARIZED REVIEW OF FIELD RESULTS

State—	Completions This Week	Completions Last Week	Producers This Week	Producers Last Week	Gas Wells This Week	Gas Wells Last Week	Failures This Week	Failures Last Week	Initial Production This Week	Initial Production Last Week
Arkansas	9	13	6	11	..	..	3	2	5,027	18,151
California	14	22	13	22	..	..	1	..	19,235	28,950
Illinois	2	2	2	2	..	..	..	..	35	60
Indiana	3	1	2	..	..	..	1	1	40	...
Kansas	15	35	3	15	3	3	9	17	275	1,537
Kentucky	24	26	10	18	1	3	13	5	425	1,073
Louisiana	14	33	4	6	6	11	4	16	460	7,250
Michigan	2	3	2	3	..	..	..	..	600	550
New York	19	..	19	..	..	..	..	..	63	...
Ohio	13	21	9	9	..	4	4	8	477	335
Oklahoma	59	60	38	21	6	8	15	31	7,197	14,651
Pennsylvania	75	..	66	..	5	..	4	..	277	...
Texas	101	123	59	66	5	2	37	55	82,830	103,239
West Virginia	13	23	3	2	6	18	4	3	111	26
Totals	363	340	236	153	32	49	95	138	117,052	175,822
Increase this week	23	..	83	..	..	..	..	..	...	...
Decrease this week	..	..	..	..	17	..	43	..	58,770	...

CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
ATHENS-ROSECRANS—		
Associated Oil Co., Higgins 3, wo.	360	5325
LONG BEACH—		
Cypress Pet. Co., Crest 3	1100	6010
Pan-American Pet. Co., U. P. 1	1050	5805
Richfield Oil Co., Haas 1	3500	6325
W. C. 1	4000	6490
Shell Co., Church 2	1400	6893
Texas Co., Croswell 2	500	6583
RICHFIELD—		
Continental Oil Co., Mullen 1	900	4065
RINCON—		
General Pet. Corp., Thompson 2	700	2980
Pan-American Pet. Corp., Hobson 5.	525	3410
SEAL BEACH—		
Superior Oil Co., Kenkel 1	1500	6555
VENTURA—		
Associated Oil Co., Lloyd 24	1500	6505
Shell Co., Edison 21	2200	7220

OKLAHOMA

Company, Well and Location	Initial Production Bbls.	Depth
CARTER COUNTY—		
Atlantic Oil Prod. Co., Eason 2, se ne se, 19-1s-3w	250	3437
Roxana Pet. Corp., Denny 2, ne sw sw, 20-1s-3w	140	3465
Magnolia Pet. Co., Anderson 3, sw ne nw, 23-1s-3w	120	2403
Hall & Briscoe, Miller 1, sw nw nw, 29-1s-3w	75	3155
Wirt Franklin Pet. Corp., Morris 1, nwc se, 11-2s-3w	175	3388
CLEVELAND COUNTY—		
Cromwell & Wirt Franklin, Donovan 1, c sw, 22-10-2w	*	4706
CREEK COUNTY—		
National Ref. Co., Futrell 4, swc ne se, 1-19-9e	200	2072
Devonian Oil Co., Unallotted 3, csl se nw, 4-18-12e	¶7	1750
Jackson & Wise, Layton 1, se nw ne, 3-17-11e	¶5	1958
F. A. Adams et al, Wiley 3, nec sw, 20-17-10e	*	2997
McCullough Oil Co., Barnett 1, nwc ne ne, 22-18-11e	*	2155
GRADY COUNTY—		
Carter Oil Co., McCaughtry 7, nw ne nw, 26-5n-8w	¶25	2060
GRANT COUNTY—		
Northern Counties Gas Co., Martin 2, swc, 23-27-3w	27	4036
HUGHES COUNTY—		
I. T. I. O. Co., Bingham 1, nwc se sw, 8-5-8e	200	2760
Noble Oil & Gas Co. et al, Wickett 1, sec, 20-5n-9e	*	3015
JEFFERSON COUNTY—		
Magnolia Pet. Co., Spring 3, nwc, 25-6s-6w	*	2945
KAY COUNTY—		
Burnham & McGraw, Swenson 1, ne nw se, 29-29-1e	¶1	956
McDorman et al, Fulton 1, swc nw nw se, 12-28-1w	¶1	790
McDorman & Messimer, Fulton 1, sec ne sw sw, 12-28-1w	*	844
MUSKOGEE COUNTY—		
Bryan & Emery, Barnett 2, swc se ne, 8-15-15e	80	1612
Barnett 3, c se ne, 8-15-15e	130	1615
P. Boyle, Larney 2, nwc sw, 9-15-15e	60	1620
Hogan & Lammers, 1, blk 5, swc nw nw, 35-15-18e	¶1	953
H. L. Jolly, Cherry 2, c ne nw, 2-14-18e	7	1243
M. C. Sells, Townlot 2, lot 24, blk 16, swc se ne sw, 6-14-19e	15	537
J. N. Nixon, Scott 1, nwc ne ne sw, 13-14-18e	*	810
Tidal Oil Co., Grimmett 12, 12-14-18e	*	1530
C. D. Bradley, Rogers 2, nec sw, 21-15-19e	*	1108
OKFUSKEE COUNTY—		
Riverland Oil Co. et al, Barnett 2, csl se sw, 19-11-11e	150	3682
Devonian Oil Co., Fier 1, sec sw ne, 11-10-11e	60	1589
J. J. Deaner et al, Grayson 3, ne se sw, 3-12-11e	*	2620
OKMULGEE COUNTY—		
Mechlin & Berlin, Colbert 7, cwl se ne, 14-14-14e	15	1075
H. Fair, Palmer 7, c s½ se, 36-13-11e	*	2540
W. B. Pine, Strin 1, sec ne nw nw, 6-12-14e	*	2816
OSAGE COUNTY—		
McCune, Wormser et al 8, nwc ne se nw, 15-24-8e	8	499
Devonian Oil Co. et al, 1, se sw ne, 5-24-9e	*	2705
Link Oil Co., 1, cnl se, 34-25-9e	*	2274
PONTOTOC COUNTY—		
Coleman Pet. Co., Martin 1, nec sw se, 25-5n-6e	30	2190
Westheimer & Daube, Wade 2, c w½ e½, 19-5-8e	468	2594
POTTAWATOMIE COUNTY—		
Magnolia Pet. Co., Risenhoover 3, se sw ne, 14-7-4e	22	4250
Shipman 3, se nw ne, 19-7-4e	360	3842
Singletary 1, se ne nw, 23-7-4e	40	4130
SEMINOLE COUNTY—		
Gypsy Oil Co., Harjoche 3, ne sw nw, 10-8-6e	625	4284
Magnolia Pet. Co., Hammond 4, nw se ne, 10-8-6e	98	4303
I. T. I. O. Co., Lizzie 3, nw sw nw, 11-8-6e	317	4204
Dixie Oil Co., Foster 3, nw sw sw, 28-8-8e	50	3980
Roxana Pet. Corp., Caeser 1, nw se ne, 11-7-6e	305	4382
The Texas Co., Hyde 5, sw ne se, 7-5-8e	700	2660
Magnolia Pet. Co.'s Reed 1, nw sw nw 17-5-8e	437	2702
Sunray Oil Corp.'s Culley 4, nw sw ne, 18-5-8e	310	2710
Sinclair Oil & Gas Co.'s Nakoche 1, nec sw, 18-5-8e	750	2716
STEPHENS COUNTY—		
Magnolia Pet. Co.'s Green 3, se sw nw, 13-1s-4w	700	2919
Wirt Franklin Pet. Corp.'s Bell 1, nw c ne, 24-1s-4w	195	2971
Murphy Oil Co.'s Fobb 13B, sec ne sw, 12-2s-8w	10	1542
Geo. Pace et al's Pennington 1, nw sw ne, 18-2s-7w	45	1487
Pearce & Brown's Wilkinson B4, swc se, 27-1s-8w	*	1490
TULSA COUNTY—		
Enfisco Oil Corp.'s Simmons 1A, nec se, 12-17-12e	8	1887
Hershell & McGill's Naye 1, sec 24-17-14e	5	1814
Barry et al's Funk 3, nwc ne, 3-16-11e	10	1938

KANSAS

Company, Well and Location	Initial Production Bbls.	Depth
BUTLER COUNTY—		
Empire O. & R. Co.'s Brandenberger 1, nec sw ne, 22-27-5e	100	2741
Phillips Pet. Co.'s Sarrah 2, sec ne, 4-27-6e	*	....
COWLEY COUNTY—		
Mission Oil Co.'s Evans 1, Lot 9, blk 42, City of Winfield, nw¼, 22-32-4e	75	2300
Slick et al's Dibbons 1A, nwc ne, 22-32-4e	¶6	2977
Roth & Faurot's Smith 2A, nwc se se 32-33-4e	¶2	1937
Shawver et al's Tucker 1, nec 21-30-4e	*	....
Lewis Gas Prod. Co.'s Cook 1, nec sw, 18-32-6e	*	3150
White Oil Co.'s White 1, swc ne, 4-33-4e	*	3150
Forrester et al's Countryman 3, c se nw 4-33-7e	*	1155
Foster & Deal's Reynolds 1, nwc ne ne, 4-33-7e	*	2900
GREENWOOD COUNTY—		
Lessen et al's Gregg 1, sec nw, 6-25-9e	100	2211
Phillips Pet. Co.'s Harris 1, c n½ ne sw, 19-22-11e	*	....
LYON COUNTY—		
Empire O. & G. Co.'s Lewis 1, sec sw se, 18-21-10e	*	2396
OSBORNE COUNTY—		
Davis et al's Pruter 1, swc se, 30-9-15w	*	3703
SEWARD COUNTY—		
Wilson & Moore's Bowles 3, nec, 3-35-34w	¶2	2745

SOUTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
VINTON—		
Vinton Pet. Co., Gray 16	15	2180
EDGERLEY—		
Green Oil Co., Moore 10	260	2950
Hercules Oil Co., Paraffine 4	60	3660
EVANGELINE—		
Cline, Smith & Cline, Conklin 7	125	1600

TEXAS GULF COAST

Company, Well and Location	Initial Production Bbls.	Depth
BLUE RIDGE—		
Navarro Oil Co., Robinson A-5,	75	3560
Bowden Oil Co., Overly 2	300	3100
H. G. Nelms et al, Blakely 1	*	930
HULL—		
Gulf, Phoenix Dev. Co. 51	140	2900
PIERCE JUNCTION—		
Rio Bravo Oil Co., Settegast A-10	1500	4330
SOUTH LIBERTY—		
J. O. Davis, Turner 1	*	980
WEST COLUMBIA—		
Gulf, Tom Hogg et al 3	120	3000

Not to take advantage of the scientific methods of drilling and cementing that caused the overproduction at Seminole is to pass up the very first step in true conservation. Oil can never be brought to the surface that is wasted underground. In the interest of our national petroleum resources, the methods used to prevent waste at Seminole should be extended to all the fields of the United States.

HALLIBURTON
OIL WELL CEMENTING COMPANY
DUNCAN, OKLAHOMA

EASTERN STATES

PENNSYLVANIA

BRADFORD FIELD—

South Penn Oil Co., Melvin 220	2	....
Melvin 221	2	....
Melvin 222	2	....
Leasure 1	4	....
Culbertson 72	3	....
Culbertson 73	dry	....
Newell 81	2	....
Hamlin 116	2	....
Fee 74	12	....
Fee 75	2	....
N. M. W. 57	2	....
Bingham 439, tr 108	7	....
Bingham 439, tr 109	2	....
Bingham 439, tr 110	3	....
Bingham 439, tr 111	3	....
Bingham 576, tr 5	5	....
Bingham 576, tr 6	¶½	....
Bingham 533, tr 95	4	....
Bingham 533, tr 96	3	....
Bingham 390, tr 4	3	....
Forest Oil Corp., July 30	2	....
July 210	2	....
Niles 1-k3	2	....
Niles 1-k2	2	....
Tyler 84	2	....
Tyler 201	2	....
Penn Pet. Co., Duke 25	7	....
Duke 26	7	....
K. Kuhn, Davis 1	7	....
Davis 2	10	....
Lane & Co., Bingham 371, tr 19	7	....
Bingham 371, tr 51	7	....
Hooper & Co., Bingham 386, tr 29	3	....
Bingham 386, tr 30	3	....
T. B. Wilson, Bingham 3	5	....
Bingham 4	7	....
N. V. V. Franchot, Loop Est 4	8	....
Loop Est 5	3	....
Davis Oil Co., Davis 15	3	....
Davis 16	3	....
W. C. Kennedy Co., Franchot 2	3	....
Franchot 3	3	....
C. & H. F. Jack, Jack 2	7	....
J. W. Kaufman, Rounds 18	15	....
E. Curtis & Co., Curtis 1	7	....
R. O. Landers & Co., Landers 4	7	....
Pressure Oil Co., Howard 9	4	....
T. P. Thompson, Jr., Thompson 20	7	....
McCool & Co., Wright 1	4	....
Ellen Barry, Foster 2	3	....
McCandless & Krampf, Burns 1	5	....
D. J. Moody, Moody 25	5	....
Minnich Bros., Morse 3	4	....
S. H. Elder, Elder 12	4	....
Esther Oil Co., Lawton 67	4	....
First Nat. Bank of Olean, Keating 2	7	....
G. H. Smith, Smith 6	5	....
A. L. Brown, Quintruple 1	4	....
Tibbitts & Murphy, Hostetter 1	3	....

BUTLER COUNTY—

Rudy & Ingold, Hackenberry 18	3	....
Recovery Oil Co., Crawford Heirs 3	dry	....
Ellenberger & Co., Kellerman 2	¶1¼	....
R. A. Marshall, Marshall 1	3	....

CLARION COUNTY—

Baughman & Co., Baughman 1	2	....
J. Wedekind, Wedekind 2	¶1¼	....
Black Gas Co., Storer 1	¶1	....

VENANGO COUNTY—

Jackson O. & G. Co., Crystal Springs 10	3	....
Mike Doka, Parker 1	¶½	....
F. E. Knapp & Co., Byers 1	2	....
Franklin Trust Co., Gordon 26	2	....
Thompson & Rice, Osmer 9	dry	....
Covert, Riddle & Co., Coast 1	2	....

CENTER-MIDDLE FIELD—

E. Pequignot, King 1	4	....
Crown Central Oil Co., Irwin 1	dry	....

NORTHWESTERN OHIO

AUGLAIZE COUNTY—

Floyd Fry & Co., Whetstone 2	17	1288

INDIANA

PIKE COUNTY—

William Bell & Co., Lindy 1	10	1581
H. Skidmore & Co., Williams 4	dry	1395

SULLIVAN COUNTY—

Ohio Oil Co., Hopewell 2	30	2300

ILLINOIS

CRAWFORD COUNTY—

One Sixth Oil Co., Evans 2	25	1017

LAWRENCE COUNTY—

Phipps, Blosser & Co., DesBouef 2	10	1026

MICHIGAN

MUSKEGON COUNTY—

Muskegon Oil Corp., H. Heinz 2	300	1660
Bradley & Bradley, Layman 1	300	1557

NEW YORK

ALLEGANY COUNTY—

Forest Oil Corp., July 3	2	....
July 4	2	....
July 5	2	....
July 6	2	....
July 7	2	....
July 8	2	....
July 9	2	....
July 10	2	....
July 02	Pressure	....
July 07	Pressure	....
July 08	Pressure	....
July 010	Pressure	....
Bradley Producing Corp., Fee 14	3	....
Fee 15	3	....
Fee 16	7	....
J. K. Cochran & Co., McDermitt 15	3	....
McDermitt 16	7	....
N. V. V. Franchot, Brandel Hrs 9	5	....
Le Suer Oil Corp., LeSuer 26	3	....
M. J. Crowley & Co., Crowley 13	3	....
W. O. Taylor & Co., Taylor 3	3	....
Hazlewood Oil Co., Hazlewood 49	3	....
Lavens Estate, Lavens 5	5	....

WEST VIRGINIA

RITCHIE COUNTY—

Astron Oil Co., Sturchburg 10	1	940
West Fork Oil Co., Tibbs 2	dry	2060
Cunningham & Co., Maxon 1	¶¼	....
Mid-Penn Oil Co., Tibler 2	dry	....

WAYNE COUNTY—

West Virginia Gas Co., Wilson 2	¶¼	1631

ROANE COUNTY—

South Penn Oil Co., Stockley 71	100	....
Aetna O. & G. Co., Ross 1	10	....
United Fuel Gas Co., Parker 1925	¶¼	1811

CALHOUN COUNTY—

Chemical Oil Co., York 1	¶¼	....
L. R. Carroll, Ferrell 1	¶¼	....

PUTNAM COUNTY—

George Salamie & Co., Mitchell 1	¶1	....
Sowders O. & G. Co., Wick 2	dry	4350

KANAWHA COUNTY—

Columbia Carbon Co., Rosin Coal Co. 1	dry	....

KENTUCKY

OHIO COUNTY—

Claypool & Co., Ralph Bros. 1	30	....
E. C. Arnold & Co., Coopage 1	10	390
Boston-Southwestern O. & G. Co., Renfrew 5	5	....
C. H. Tremor, Lloyd 1	dry	....
Creek Drilling Co., Westerfield 1	dry	....
Globe Oil Co., Westerfield 1	dry	875
Wabash Drilling Co., Massie 1	dry	....

DAVIESS COUNTY—

Leeper Oil Co., Mahloskey 2	120	1253
L. C. Young & Co., Hayden 4	180	996
Eastern Gulf Oil Co., Murray 2	30	....
Wade & Moore, Burton Heirs 2	30	....
The Pure Oil Co., Howard 1	12	....
Creek Drilling Co., Tyler Hrs 1	18	1240
Atlantic Oil Refg. Co., Trodgen 2	dry	1238
Miller & Damron, Jim Brown 2	dry	....
White & Co., Wall 1	dry	....
Imperial O. & G. Co., Jewell 1	dry	1380
Fee 1	dry	....
D. N. Baker & Co., May 1	dry	....
C. E. Warner, Jim Brown 1	dry	1220
Bert Thompson, Pulliam 3	dry	....
French, Clay & Co., Horton 1	¶1¼	....
Burns & Co., Howard 1	dry	845
Harrison & Evans, Jones 1	dry	....

McLEAN COUNTY—

Ohio Oil Co., John Rudy 1	35	....
Price Heirs 1	dry	....
Bardollitti-Meany Dev. Co., Sanders 1	dry	1184

POWELL COUNTY—

Petroleum Exploration Co., Allen 1	dry	....

SOUTHEASTERN OHIO

WASHINGTON COUNTY—

John Grau & Co., Steindoff 1	10	1519

CENTRAL OHIO

PERRY COUNTY—

William Cline & Co., Griswold 1	65	3500
Allegheny Oil Co., Bennett 1	dry	1070
Wehrle Interests, Fletcher 5	35	3565
H. J. Bierley & Co., McGuire 1	165	3520

MUSKINGUM COUNTY—

William Cline & Co., Holl Pottery Co. 1	65	3500
Hoberharat & Co., Zanesville Coal Co. 1	100	3610
Ralph Bros., Faucett 1	dry	3312

LICKING COUNTY—

Preston Oil Co., Wright 1	12	750
Robinson & Zahneizer, Hupp 1	25	....

FAIRFIELD COUNTY—

E. O. Sloan & Co., Moyer 1	dry	2650

COSHOCTON COUNTY—

Logan Gas Co., Clark 1	dry	3256

ARKANSAS

NEVADA COUNTY—

Autrey Oil Co., Wells & Mays 1, 6-14-20	25	1188

UNION COUNTY—

Magna Prod. Co., Rowland B-1, 14-17-14	500	3065
Ohio Oil Co., Goodwin 2, 2-17-14	2	3054
Pure Oil Co., Gregory 2, 11-17-14	500	3229
Gregory 6, 11-17-14	3500	3186
Rushing et al, Gregory 6, 11-17-14	500	3226

LOUISIANA

DE SOTO PARISH—

Monrovia Co., Nabors 1, 32-13-11	¶½	770

MOREHOUSE PARISH—

Southern Carbon Co., Davis 1, 21-20-4e	¶45	2148

OUACHITA PARISH—

Southern Carbon Co., Fairbanks 9, 34-20-4e	¶8	2165

RICHLAND PARISH—

W. C. Feazel, Pardue 1, 32-16-6e	¶46½	2450
Feazel & Hemler, Pardue et al 1, 21-16-6e	¶51	2445

WEBSTER PARISH—

Magnolia Pet. Co., Sexton 1, 32-23-9	¶28	2697

WEST TEXAS

CRANE COUNTY—

Gulf Prod. Co., McElroy 51	460	2905

YATES FIELD—

Mid-Kansas-Transcontinental, Smith-Taylor 15	15,000	1535

WINKLER COUNTY—

Atlantic Oil Prod. Co., Grisham-Hunter 2-E	1600	2721
Ida Hendrick 8-D	1680	2900
Humble O&R Co., T. G. Hendrick 3-B	3000	2837
T. G. Hendrick 4-C	700	2892
Landreth & Roxana, Hendrick 7-A	3600	2974
Marland Prod. Co., Hendrick 4	15,000	2755
Pure Oil Co., Grisham-Hunter 8-B	¶10-780	27
Republic Prod. Co., Grisham-Hunter 1-B	5000	2494
Roxana Petroleum Corp., Hendrick 6-D,	2000	2709
Ida Hendrick 1-F	14,000	2675
Ida Hendircck 6-B	9000	2997
Southern Crude-Dixie Oil Co., Hendrick 2-F-T67	1200	2944
Hendrick 1-T-264	*	2790

TEXAS PANHANDLE

Donley County—

A. T. Drilling Co., Harrington 1	*	3700

GRAY COUNTY—

Magnolia Pet. Co., W. Harrah 1	200	3250
The Texas Co., J. E. Williams 2	800	2734

HUTCHINSON COUNTY—

Skyrockett Oil Co., Jameson 1	25	3244

WHEELER COUNTY—

Angus et al, Trostle 1	¶9	1805
Clark et al, Purcell 1	¶23	1855
Edwards et al, Trostle 1	¶5	1850

CENTRAL WEST TEXAS

BROWN COUNTY—

Anna Belle Oil Co., Hickman 4	50	1285
Baker et al, Henderson 1	*	640
Charter Oil Co., Byler 6	50	1354
Cranfill-Reynolds, Eubank 7	400	1270
Daniels et al, Payne 1	*	1340
Henshaw Oil Corp., Bush 16	300	1095
Humble O&R Co., Lewis 1	*	1696
Jay Hawk Oil Corp., Boysen 7	25	1230
Midland Oil Co. et al, Butler 5	220	1292
Milham Corp., Rosser 1	240	1302

CALLAHAN COUNTY—

Humble O&R Co., Head Bros. 1	*	2110
Sterling Oil Co., Beasley 3	10	722
Warren & Hays Oil Corp., Hickman 2	*	806

COLEMAN COUNTY—

Charter Oil Co., Crump 1	75	1869
E. J. Cunningham et al, Jennings 2-B	140	1197
Massey Oil Corp., Wells 1	5	1517
Moutray Oil Co., Miller 1	*	3627
Tower & McKana, Moody 1	115	1863

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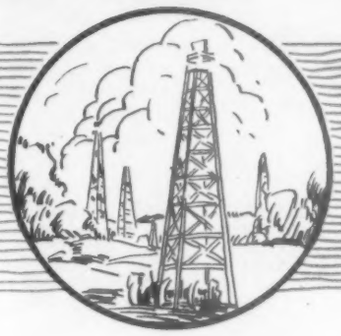
- Hindman Sub-Swivels
- W. K. M. Products



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A glance at the list on the left will show the quality of materials we carry in stock—LET US HAVE YOUR ORDERS.

"KNOWLEDGE"

T. T. WORD SUPPLY CO.

OF OIL FIELD PROBLEMS AND EQUIPMENT

HOUSTON, TEX. SHREVEPORT, LOUISIANA. LAKE CHARLES LA.

Company, Well and Location	Initial Production Bbls.	Depth
EASTLAND COUNTY—		
Hoffman & Page, Foster 1	¶1	1266
Mays et al, Morton 1	¶¼	1493
Parsons et al, Blackwell 5	¶6-50	2983
Andy Rhodes et al, Henning 1	2400	3178
SHACKELFORD COUNTY—		
Geo. Callahan et al, Nail 3	*	1558
Harris et al, Matthews 3	*	1247
Roeser-Pendleton, Inc., Cook 64-A	70	1176
Cook 68-A	40	1171
Cook 70-A, (Sec. 60)	100	1205
Cook 3-A, (Sec. 61)	150	1356
Tannehill-Kiser et al, Matthews 3, (Sec. 27)	190	1170
Matthews 2, (Sec. 28)	*	1253
STEPHENS COUNTY—		
TP Coal & Oil Co., Wm. Graham 11	*	1920
NORTH TEXAS		
ARCHER COUNTY—		
Bridwell Oil Co., Wilson 1-B	100	1577
L. T. Burns et al, Wilson 1-I	*	1538
Staples 1	*	1559
F. P. Rose et al, Garvey 3	†	5515
Wright et al, Wilson 5	*	1343
CLAY COUNTY—		
A. W. Phillips et al, Myers 1	*	515
COOKE COUNTY—		
J. C. McFarland et al, M. K. & T. Fee 4	*	1674
ELECTRA—		
J. S. Bridwell et al, Waggoner 1	*	1934
C. H. Clark et al, Waggoner 8	*	1230
K-M-A & IOWA PARK—		
Continental Oil Co., K&K 2	10	673
K&K 3	10	675
K&K 4	10	674
K&K 5	*	719
K&K 6	*	695
W. B. Omohundro et al, Wm. Murrey 1	25	865
Wm. Murrey 2	10	872
Wm. Murrey 3	*	895
W. W. Overby 3	*	823
W. W. Overby 4	5	803
MONTAGUE COUNTY—		
Bridwell & Continental Oil Co., Cunningham 2-A	60	1300
WILBARGER COUNTY—		
Fain-McGaha Oil Corp., Waggoner 4-S	900	2392
Golding-Cochran & Marland Prod Co., Waggoner 1-E	75	1919
Phillips Pet. Co., Waggoner 19-NN	80	2310
Norwood-Waggoner 1	†	1987
Shaw Oil Co., Waggoner 1	140	2365
Waggoner Ref. Co., Waggoner 4-E	175	2331
Waggoner 1-G	325	2372
YOUNG COUNTY—		
Atlantic Oil Prod. Co., Thomas 1	*	760
Atlantic & Casey, Brainard 2	*	603
Bullington-Lee et al, Boone 5	30	507
Gatewood & Willis, Rogers 1	*	760
Hinson & Tidwell, Ragland 1	*	2565
Hynes Oil Co., Carter 1	*	3937
Kerbow et al, Lowrance 1	*	473
Parker et al, Johnson 4	*	752
Petroleum Prod. Co., Wilson 1	*	1200
Pitzer & West, Costello 4	35	1852
Shadbolt & Creighton, Baker 2	*	603

Drilling in Nebraska

Casper, Wyo.—The present summer will see the first earnest effort made by a major operator to develop the oil possibilities of the State of Nebraska. The Ohio Oil Company is drilling below 1000 feet in its test on Section 30-1n-13w, seven miles southwest of Riverton, and one mile north of the Kansas line. This company has some 30,000,000 acres under lease on three structures, all of which have been geologized by diamond core drill.

Another test has been drilling for some time eight miles southeast of Beaver City, with the present depth around 1500 feet. Hastings, Nebraska, local capital is backing the venture. A third well is being drilled west of Beaver City by the U. S. Drilling Company; it has reached a depth of 4000 feet or more.

Long Beach Production Climb Halted Around 200,000 Barrels

(Continued from page 54)

bee 1, regarded as one of the most important tests now drilling in the Los Angeles basin, is the first deep well drilled in the southeastern part of the Santa Fe Springs field and is expected to settle the argument—one way or another—concerning the existence of a deeper productive zone. The company is withholding any information relative to the test, but estimates place the present depth at 5680 feet. Efforts have been made to discourage deeper drilling in the field at this time, but the increasing demand for light oil has overbalanced the conservation movement in this particular case.

The Barnsdall Oil Company continued its success in the Athens-Rosecrans field with the re-completion of Rosecrans 6 as a 1000-barrel producer, from 5265 feet. The oil is 42 gravity and shows a cut of only one per cent. The well was deepened from 4945 feet, having been a good producer in the upper sand. Barnsdall has deepened several wells in this field and has developed a large production of high gravity oil.

California Permits

San Francisco. — The weekly report of the Department of Petroleum and Gas shows that 30 new wells were started in the State, as compared with only 15 during the previous week. Long Beach accounted for 12 of these, with the remainder scattered all over the State. The total new wells this year is 444, as compared with 678 at the same time last year. Abandonments to date this year number 280, as compared with 240 at this time last year.

Six-Day Week

Los Angeles — Following the lead of the Standard Oil Company of California, the General Petroleum Corporation, subsidiary of the Standard Oil Company of New York, and the Union Oil Company have announced a six-day week for all employes. Other large companies are considering such a plan and are expected to give employes one day per week as soon as the necessary arrangements can be made. The Department of Industrial Relations considered the question at a meeting called June 18.

California Tax

San Francisco. — In connection with the assessment of a small tax to maintain the Department of Petroleum and Gas, it is disclosed that the total proved oil land of the State is 125,131 acres. This land lies in eight counties and is distributed as follows: Fresno County, 14,665 acres; Kern County, 80,075 acres; Los Angeles County 10,794 acres; Orange County, 6797 acres; Ventura County, 4938 acres; Santa Barbara County, 7474 acres; San Luis Obispo County, 308 acres, and Santa Clara County, 80 acres. Of the total amount of land, only 101,204 acres are assessable, since 23,927 acres are owned by State, federal and city governments or are not assessable for other reasons. The estimated cost of maintaining the department is $176,000. This amount will be raised by levying a tax of $0.1739 against each proved acre of oil land, $0.00066443 against each barrel of oil produced in the State during 1927 and the same amount against each 10 thousand cubic feet of gas produced during the same period.

Mt. Poso

Bakersfield, Calif.—Encouraged by recent extensions, major operators holding large leases in and near Mt. Poso field are planning to drill more than 25 wells within the next few months. The tentative program calls for the development of parts of Sections 22 and 15-27-28 and the drilling of at least four wells in the main part of the field. Mt. Poso yields some of the largest pumping wells in the State, but production has been almost completely shut in since its discovery by the Shell Company.

Lease Near Oxnard

Oxnard, Calif.—Several large companies have leased more than 6000 acres near this place, following a series of surveys to determine the oil possibilities of the region. Some of the leases call for a monthly rental of one dollar per acre, in addition to a clause requiring the immediate drilling of test wells. Shell and Standard have long been interested in the area and the former has drilled several shallow tests on its holdings.

Kern County

Bakersfield, Calif. — Leasing in the wildcat areas of Kern County is still active, although the average lease recorded is much smaller than that of a few months ago. In the Edison district, where the General Petroleum Corporation is drilling a deep test on Section 5-30-29, all available acreage is being acquired, notwithstanding the failure of the well to pick up oil showings. Leases in the Fruitvale district are closely held, little acreage being available near the Pacific Eastern's discovery wells.

Albuquerque, N. M.—Marland Oil Company of Colorado reports that it is completing another big gas well in Lea County, six miles north of its first well. Total depth is around 2733 feet. Although no gauge of the production has been made the well has sufficient pressure to blow the tools from the hole.

Many More Years of Better Operation

"Easy on the Line" is the slogan of the Beaumont Iron Works Company, of Beaumont, Texas, for their Timken-equipped crown blocks and traveling blocks. Easy on power, too, for the same reason. Yet the elimination of all possible friction — and lubrication — is only one Timken advantage.

The extreme endurance and the permanent alignment which come from Timken thrust-radial capacity are the basis of the oil country's overwhelming preference for Timken Bearings. Not alone better operation, but *many extra years of it,* result from the exclusive combination of Timken tapered construction, Timken *POSITIVELY ALIGNED ROLLS,* and Timken-made electric steel. Equipment manufacturers and operators have convinced themselves. There are more Timken Bearings in the oil fields than all other anti-friction makes combined!

THE TIMKEN ROLLER BEARING CO., CANTON, OHIO

TIMKEN
Tapered
ROLLER BEARINGS

Say you saw it in The OIL WEEKLY

PERMITS GRANTED FOR NEW WELLS

WEEKLY COMPARISON OF NEW WELLS

Following is a condensed table giving a comparison of permits or locations made for new wells during the past year in Kansas, Oklahoma, Arkansas, Louisiana, Texas, California and the Mountain States:

	Week ending June 16	Prev. ious week	Total this month	Total this year	This week last year	This month 1927	Total same date 1927	Year total 1927
Arkansas	21	40	66	183	5	16	193	329
California	30	34	64	466	36	50	937	1,226
Louisiana	14	20	47	336	7	35	317	812
Kansas	6	18	54	508	13	41	528	972
Oklahoma	71	71	202	1,504	43	144	2,072	3,702
Texas	218	129	473	3,632	140	386	5,093	8,665
Mountain States	...	...	...	...	...	10	295	494
Totals	360	312	906	6,629	244	682	9,235	16,149

CALIFORNIA

COALINGA—Calif. Northern Pet. Co., No. 19, 2-21-14.

KERN COUNTY—Milham Explo. Co., Hume 1, 8-28-23.

LONG BEACH—Sovereign Oil Co., No. 4, 20-4-12; Cannon-Jones Oil Co., Hall-Webber 1, 29-4-12; Graham-Loftus Oil Co., Daly 1, 19-4-12; The Texas Co., Foster One-4, 19-4-12; McKeon Drilling Co., Inc., Macrate 2, 29-4-12; General Pet. Corp., Clock 5, 30-4-12; Hancock Oil Co., Signal 11, 19-4-12; Turner-Harris Oil Corp., 2, 29-4-12; Shell Co., C-C 12, 19-4-12; Alamitos 34, 29-4-12; Nesa 9, 29-4-12; J. C. 9, 29-4-12.

MIDWAY—North American Oil Cons., No. 45, 30-31-24; No. 13-A, 2-32-23. Standard Oil Co., No. 218, 1-32-23. Republic Petroleum Co., No. 32, 8-32-23.

MT. POSO—Petroleum Securities Co., Reuch 6, 22-27-28.

POTRERO—Associated Oil Co., Voorhes 1, 35-2-14.

RICHFIELD—Union Oil Co., Stern 13, 33-3-9.

RINCON—Southern Pacific Land Co., No. 5, 8-3-24.

RIVERSIDE COUNTY—Hall, Holtz and Hennessy, Tr., Watt 1, 23-7-3.

ROUND MOUNTAIN—Shell Co., Jewett 3, 29-28-29.

SANTA FE SPRINGS—The Texas Co., Matern 2, 6-3-11.

SESPE—Wasibi Oil Co., No. B, 34-5-19.

SANTA BARBARA—Barnsdall Oil Co., Luton-Bell 1, 4-29.

SUNSET—Standard Oil Co., No. 225, 31-12-23.

VENTURA—Shell Co., Gosnell 27, 28-3-23. Petroleum Securities Co., Orton 10, 28-3-23.

OKLAHOMA

CARTER COUNTY—Cox & Hamon, Vorhees 3, ne se nw, 23-1s-3w. Magnolia Pet. Co., Lewis 3, se ne nw, 23-1s-3w. Hall & Briscoe, Miller 2, nw ne sw, 29-1s-3w.

CREEK COUNTY—J. Hayden, Futrell 3, nwc se se, 1-19-9e. J. A. Hull Co., Walker 3, sec sw sw, 21-18-9e. Haddock et al, Evans 1, nec se sw, 16-17-9e. R. Kirdhner et al, Drew 1, c ne sw, 8-17-10e. Wilcox O. & G. Co., Kimble & Reading 5, nwc ne nw, 18-14-10e.

GARVIN COUNTY—Magnolia Pet. Co., Tussy 1, sw nw se, 31-1n-3w.

GRADY COUNTY—Champlin Ref. Co., Kerns 1, nec sw, 13-4n-8w.

KAY COUNTY—Burnham & McGraw, Alberty 2, cnl s½ se se, 32-29-1e. Carter Oil Co., Poole 1, nec nw sw, 30-25-1w.

MUSKOGEE COUNTY—C. O. Buckles et al, Barnett 8, nec nw se, 8-15-15e. N. F. Hancock et al, Grimmett 1, nec nw nw sw, 10-15-17e. Towner & Witte, Bucher 1, sec nw, 23-15-18e. Metzger Bros., Gibson 3, cel se sw, 33-15-18e. Hogan & Lammers 2, blk 5, swc nw nw, 26-15-18e. J. Philpin et al, Anspach 1, cel nw sw sw, 20-15-19e. J. N. Nixon, McDonald 1, nec sw se, 29-15-19e. Dodge et al, Bumpass 2, nec se nw ne, 17-14-16e. W. D. Cameron, Manuel 1, cwl nw nw, 6-14-17e. Howard & Huff, Fewel 1, nec nw ne, 22-14-18e. J. S. Routt, Timberlake 1, sw se se, 11-14-19e. E. A. Smith et al, Smith 1, sec sw sw se, 18-13-19e.

OKFUSKEE COUNTY—Henry & Avers, Buckley 4, cwl se sw, 12-12-11e. Devonian Oil Co., Fier 2, sec sw ne, 11-10-11e. W. L. Umbrum, Simmer 3, nwc ne se, 11-10-11e.

OKMULGEE COUNTY—G. D. Roberts, Graham 2, sec nw ne, 22-15-11e. Lavery & Farrell, Carter 2, nec se se, 10-15-14e. F. D. Misener, Francis 11, nwc, 11-15-14e. J. Spencer, Scott 1A, c nw sw, 12-15-14e. J. L. Nourse, Rowe 2A, nec se nw, 20-15-14e. Papoose Oil Co., Rainey 9, cwl ne sw, 21-15-14e. E. J. Lambert, King 7, cnl ne sw, 7-13-15e.

OSAGE COUNTY—Maurice F. Breene 1, nec, 3-28-10e. Nath Jones 1, se sw nw, 25-26-8e. Sand Springs Home 9, cel w½ ne, 5-20-11e.

PONTOTOC COUNTY—Homaokla Oil Co., McCall 12, ne nw ne, 17-5n-8e. Homaokla Oil Co., Berry 5, sw se ne,19-5n-8e.

POTTAWATOMIE COUNTY — Magnolia Pet. Co., Robbins 4, sec, 15-7-4e. Magnolia Pet. Co., Singletary 3, sec nw, 23-7-4e. Magnolia Pet. Co., Wilbran 1, swc se, 24-7-4e. Sinclair Oil & Gas So., Blandin 2, sec sw, 24-7-4e. Sinclair Oil & Gas Co., Coley 1, sec, 24-7-4e. Blackwell Oil & Gas Co., Cherry 1, nwc ne, 25-7-4e. Blackwell Oil & Gas Co., Cherry 2, nec, 25-7-4e. Gypsy Oil Co., Cherry 2, nec nw, 25-7-4e. McCullough Oil Co. et al, Bruno 2, nwc sw ne, 25-7-4e.

SEMINOLE COUNTY — Gypsy Oil Co., Sango 10, ne se se, 1-9-5e. Barnsdall Oil Co., Bruner 3, ne se sw, 2-9-5e. T. B. Slick, James 1, nw se sw, 6-9-6e. Pure Oil Co., Bryan 1, nec, 15-9-7e. Gypsy Oil Co., Mosar 1, sec ne, 1-8-5e. I. T. I. O. Co., Ritenour 1, se sw sw, 22-8-5e. Gypsy Oil Co., Baby 1, swc ne, 6-8-6e. Barkus 1, sec sw, 6-8-6e. McCullough Oil Co., McGilbray 1, swc ne, 4-8-4e. Carter Oil Co., Jackson 3, sw nw ne, 11-7-6e. Moore 1, se ne nw, 11-7-6e. Shaffer O. & R. Co., Carolina 1, se sw ne, 4-6-7e. Magnolia Pet. Co., Reed 2, ne sw nw, 17-5-8e. Anderson & Pritchard Culley 3, swc ne, 18-5-8e. Gulley 4, nwc se, 18-5-8e. Anderson & Pritchard Culley 5, cnl ne nw se, 18-5-8e. Gypsy Oil Co., Peter 3, sec nw, 18-5-8e. Sinclair O. & G. Co., Peter 1, se nw nw, 18-5-8e. Prairie O. & G. Co., Rogers 1, se ne se, 11-10-6e.

STEPHENS COUNTY—Harry Muse et al, Branch 1, swc se, 1-2s-8w. Clark & Cowden Watkins 1, se ne sw, 22-2s-7w.

WAGGONER COUNTY—A. E. Carder, Atkins 1, nwc ne se, 25-18-15e. Mack Drlg. Co., Cousin 1, sec nw, 15-17-15e.

KANSAS

ELLIS COUNTY—Rush Oil Co., Gatewood 1, nwc, 4-15-20w.

GREENWOOD COUNTY—Empire O. & R. Co., Schwab 14, swc sw ne, 25-22-12e. Murphy et al, Dorset 1, swc se se, 31-24-9e. Henderson & Holdren, Gaffney 3, nwc ne sw se, 7-24-11e. Murphy et al, Olso 4, nwc se, 6-25-9e. McGinnis et al, Finch 1, nec sw, 1-26-12e.

STEVENS COUNTY—Sidwell et al, Kelly 1, sec nw, 16-34-38e.

TEXAS

ARCHER COUNTY—Texas Co., Wichita Falls, W. P. Ferguson 1, S 2, S. P. Ry. sur, 1320 ft from w & 1980 ft from n line. E. R. Marts, Dallas, Prideaux 3, blk 8, A. McMullen sur, 550 ft from e & 450 ft from s line. L. T. Burns, Wichita Falls, Staples 1, blk 42, L. M. Meade sur, se corner; McCrory 1, blk 115, Amer. Trib. sur, 150 ft from s and e lines; Taber 2, No. 11, D. C. S. L. sur, 750 ft from n & 450 ft from e line. H. M. Kelleher, Wichita Falls, Andrews 1, Wm. Lockhart sur, 150 ft from n & w lines. Riner & Omohundro, Wichita Falls, Ruddy 1, J. T. O'Reily sur, 150 ft from n & 450 ft from w line. Panhandle Ref. Co. & Johnson, Wichita Falls, Garvey 5, 1855, TE&L sur, 300 ft s of No. 1.

AUSTIN COUNTY—Humble O. & R. Co., Houston, Bracey 1, Wm. White sur, 310 ft from n & w lines.

BROWN COUNTY—Clark-Buffalo Oil Corp., Brownwood, Perry 5, No. 624, J. Kinney sur, 150 ft from n & e lines; Keene 1, H. J. Kern sur, 1750 ft from n & 150 ft from w line. Wheelock & Collins, Corsicana, Smith 9, S 3, SA&MG sur, 300 ft e of No. 4. Sinclair O. & G. Co., Fort Worth, Eubanks 3, S 141, R. Mitchell sur, 453 ft from n & 150 ft from e line. Cranfill & Reynolds, Cisco, Kellar 3, No. 141, R. Mitchell sur, 300 ft s of No. 2; Eubanks 6, No. 141, R. Mitchell sur, 1308 ft from n & 450 ft from w line; 1, 300 ft s of No. 5. Royal Pet. Co., Brownwood, Etheridge 7, K. C. S. L. sur, 840 ft from n & e lines. Scrivner & Honea, Brownwood, Suttles 1, S 140, R. Mitchell sur, 150 ft from e & 530 ft from s line. J. F. Gracey et al, Coleman, Baker 1, No. 623, R. Honeycutt sur, 150 ft from w & 118 ft from s line; 2, 400 ft e of No. 1; 3, 400 ft e of No. 2. Henshaw Oil Corp., San Angelo, Bush 16, No. 624, J. Kinney sur, nw corner. Henry Gutzman, Fort Worth, Stanley 2, No. 130, W. A. Smith sur, 450 ft from e & 150 ft from s line. F. S. Preston et al, Brownwood, Denman 1, O. Benton sur, se corner. F. N. May, Santa Anna, Whitden 10, No. 52, Wm. Irion sur, 300 ft from e & 1375 ft from s line. Royal Pet. Co., Brownwood, Etheridge 8, K. C. S. L. sur, 630 ft from s & e lines.

BEXAR COUNTY—Geo. E. Gunter, San Antonio, Wiseman 67, 1, J. Montez, blk 10, 150 ft from nw & sw lines. Schimmel Prod. Corp., Fort Worth, Tick 6, No. 265, J. Wilson sur, 590 ft s of No. 5; Koehler 28, No. 265, J. Wilson sur, 690 ft ne of No. 27.

BORDEN COUNTY—H. L. Doheny, Jr., Los Angeles, Koonsman 1, S 2, blk 2, T&NO Ry. sur, 150 ft from n & w lines.

CALLAHAN COUNTY—L. H. Wentz, Eastland, Williams 1, S 26, D&D Asy. sur, 150 ft from n & e lines. Young Bros. & Alexander, Inc., Fort Worth, Ramsey 8, S 31, D&D Asy. sur, 635 ft from w & 590 ft from s line; Diller 8, S 52, L. A. L. sur, 150 ft from e & 512 ft from s line. B. W. Swoveland, Ranger, Williams 1, S 139, D&D Asy. sur, 150 ft from n & e lines. L. H. Wentz, Eastland, Williams 1, S 26, D&D Asy. sur, 150 ft from n & e lines. Ungren & Frazier, Putnam, Snyder 1, S 142, BBB&C sur, 450 ft from n & 150 ft from w line. Godley O. & G. Co., Dallas, Kennedy 15, S 8, Bayland Asy. sur, 450 ft from s & e lines; 13, 150 ft from s & e lines; Buchanan 23, Bayland Asy. sur, 300 ft from w & 150 ft from s line; 24, 900 ft from w & 150 ft from s line; 25, 1200 ft from w & 150 ft from s line; 26, 300 ft e of No. 26; Kennedy 12, S 8, Bayland Asy. sur, 450 ft from n & e lines; 14, 450

Shattering Records "to beat the band"

Within 60 days more records for drilling have been made, with Bettis Casing Protectors, than any similar period of time in the history of the Oil Industry.

RECORD NO. 1

The deepest producing well in the World (Ventura Field) was fully equipped with Bettis Protectors.

RECORD NO. 2

The deepest flowing well in the World (Long Beach Field) was also fully equipped with Bettis Protectors.

RECORD NO. 3

The largest string of 6¼" casing ever set was protected by Bettis Protectors.

RECORD NO. 4

The fastest drilled hole in Signal Hill Field had drill pipe equipped with Bettis Protectors. Completed well to depth below 7,500 feet in 76 workings days. Incidentally this particular well was completed quicker than any other of similar depth.

RECORD NO. 5

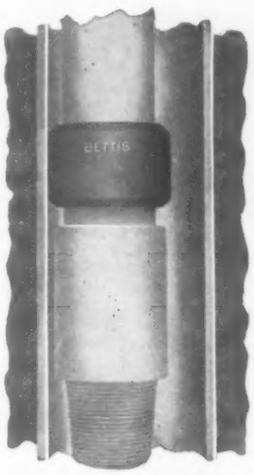
Several big Companies, (one drilling in Ventura, the toughest field) will not run a single string unless equipped with Bettis Protectors. Five of the largest Companies equipped their pipe every 20 feet.

RECORD NO. 6

One Company in Ventura Field is now drilling beyond 7,600 feet —the deepest well in which these rubber protectors are being used.

RECORD NO 7.

In open-hole drilling through 2,000 feet of rock formation with 18" rock bit (believed to be the severest test ever imposed) Bettis Protectors were used and the same set of rubber protectors are still in service. Collar replacements eliminated.



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"Best bet yet"

RECORD NO. 8

One of the big Companies formerly operating two trucks exclusively hauling drill pipe from field to shop to be rethreaded and to put on new collars, has after equipping pipe with Bettis Protectors, dispensed with the two trucks and shop operations.

RECORD NO. 9

Over 25,000 Bettis Protectors now in service—more than any other type.

RECORD NO. 10

One set of Bettis Protectors drilled 12,400 feet of hole, caliper a loss of less than 1/16" in diameter and are still in service.

RECORD NO. 11

One Company has had a full string in constant 24-hour-day service for 125 days and reports continued protection to collars.

RECORD NO. 12

One Company reports twist-offs reduced to one-half.

Get on the Band Wagon and use Bettis Protectors. Here are 12 big reasons and we have many others.

Ask for more facts.

Bettis casing protector

ft from e & 150 ft from s line; 17, 300 ft from n & 750 ft from e line.

COLEMAN COUNTY—Archie Shaw, Burkett, Burns 43, No. 168, A. Wickson sur, 1261 ft from n & 750 ft from w line. Derby Oil Co., Wichita, Kan., Jennings 3, blk 94, A. S. Lipscomb sur, 150 ft from w & 535 ft from s line. Burke-Greis Oil Co., Fort Worth, Dibrell 12, No. 265, J. W. Hicks sur, 150 ft from s & w lines. Manhattan Oil Co. & Owens, Brownwood, Shaw 1, No. 272, W. H. Bynum sur, center; Richardson 1A, Wm. Dorman sur, 899 ft from e & 1101 ft from s line. Midsun Oil Corp., Brownwood, Overall 1, S 10, blk 1, GH&H Ry. sur, 200 ft from n & w lines.

CALDWELL COUNTY—Magnolia Pet. Co., Dallas, Rios 4A, J. Henry sur, 150 ft from s & w lines; Mercer 8, J. Berry sur, 300 ft se of No. 5. Sun Oil Co., Dallas, Talley 6, W. C. Swearingen sur, 300 ft se of No. 4. Golden West Oil Co., San Antonio, Wilson 1, D. A. Floyd sur, 150 ft from nw & sw lines. Magnolia Pet. Co., Dallas, Rios 2, J. Henry sur, sw corner.

CROCKETT COUNTY—R. H. Compton, Jr., San Angelo, University 1, S 15, blk 50, Univ. Lands sur, 725 ft from w & 1687 ft from s line. Renek Oil Co., Fort Worth, University 1, S 8, blk 47, Univ. Lands sur, center.

CHILDRESS COUNTY—Texas Co., Wichita Falls, Smith 1, S 774, blk H, W&NW sur, 1000 ft from n & w lines.

EASTLAND COUNTY—Price & Reyses, Eastland, Holcomb 1, J. House sur, 150 ft from n & 560 ft from e line. Texas Pacific Coal & Oil Co., Ranger, Fee 4, W. Van Norman sur, 110 ft from e & 450 ft from s line. R. W. Clavenger, Cisco, Penn 2, No. 468, S. P. Ry. sur, 300 ft from n & 750 ft from e line. Clark & Upp, Dallas, Vance 1, S 4, H&TC Ry. sur, ne corner.

EDWARDS COUNTY—Magnolia Pet. Co., Dallas, Whitehead 2, S 88, blk D, GC&SF Ry. sur, west central.

FORT BEND COUNTY—Watts Oil Co., Houston, Blakely 6, blk B, E. Drew sur, 200 ft from s & w lines; 5, 50 ft from n & e lines. Texas Co., Houston, Farmer 1, J. Scott sur, 1100 ft from se & 1850 ft from sw line.

FRIO COUNTY—Donaldson Oil Dev. Co., San Antonio, Brown 1, S 2, center.

FREESTONE COUNTY—Alexander & Lyles, Inc., Dallas, Boyd 1, No. 4, S. Sanchez sur, 50 ft from w & 750 ft from s line.

GRAY COUNTY—Hermann et al, Amarillo, McLarty 1, S 1, blk 1, ACH&B sur, 330 ft from s & w lines. Skelly Oil Co., Tulsa, Okla., Schafer 7, S 85, blk 4, I&GN sur, 330 ft from n & e lines. Baldridge & Sherin, Wichita Falls, Chapman A1, S 9, E. N. Lynch sur, 330 ft from s & e lines; Chapman B1, S 10, blk 26, H&GN sur, 330 ft from n & e lines.

HALL COUNTY—Rio Bravo Oil Co., Houston, Hughes 1, S 59, blk H, J. H. Stephens sur, 630 ft from n & 160 ft from e line.

HOWARD COUNTY—Marland Oil Co., Fort Worth, Chalk E3, S 124, blk 29, W&NW sur, 330 ft from w & 1700 ft from s line. Godley O. & G. Co., Dallas, Hooks 9, S 140, blk 29, W&NW sur, 400 ft e of No. 4. Cosden Oil Co., Inc., Fort Worth, Roberts 3A, S 129, blk 29, W&NW sur, 330 ft from s & w lines; 4A, 330 ft from s & e lines. Godley O. & G. Co., Dallas, Hooks 4, S 140, blk 29, W&NW sur, 400 ft e of No. 3.

HARRISON COUNTY—Magnolia Pet. Co., Dallas, Vincent 3, R. J. Bedford sur, 220 ft from w & 213 ft from s line.

HARRIS COUNTY—Moody Corp., Houston, Settegast B2, No. 44, J. Kopman sur, 390 ft from e & 330 ft from n line. Cullen & West Prod. Co., Houston, Morris 100, 1, W. T. Charles sur, 600 ft from w & 50 ft from n line.

HUTCHINSON COUNTY—Gulf Prod. Co., Fort Worth, Dial 42, S 22, blk 47, H&TC sur, 660 ft from s & w lines; 43, 660 ft from w & 1980 ft from n line.

HARDIN COUNTY—Paraffine Oil Co., Fee 73, 97 ft se of No. 58.

HENDERSON COUNTY—G. C. Foster, Dallas, Richards 1, I. W. Burton sur, east central part of lease.

IRION COUNTY—Chenango-Yakima Oil Co., San Angelo, Lindley 1, S 34, GC&SF sur, center.

JEFFERSON COUNTY—Yount-Lee Oil Co., Beaumont, McFaddin 72, blk 1, P. Humphreys sur, 47 ft from e & 1590 ft from n line.

JONES COUNTY—Robert Oil Corp., Breckenridge, Grayson 1, S 13, blk 18, T&P Ry. sur, 798 ft from e & 182 ft from s line. Snowden & McSweeney Co., Fort Worth, Bickley 1, S 50, blk 18, T&P Ry. sur, 330 ft from n & 319 ft from e line. Phillips Pet. Co., Bartlesville, Okla., Sharp 2, S 14, blk 19, T&P Ry. sur, 965 ft from w & 182 ft from n line.

JIM HOGG COUNTY—T. P. Morgan, San Antonio, Hinnant 1, blk 17, Las Animas sur, 150 ft from n & e lines. Magnolia Pet. Co., Dallas, Merchant's Bk. 38, S 415, F. M. Brister sur, 1000 ft e of No. 37.

KENT COUNTY—Phillips Pet. Co., Bartlesville, Okla., Sandel 1, S 429, blk D, H&TC sur, 330 ft from s & w lines.

KLEBERG COUNTY—Humble O. & R. Co., Houston, Dennett 2, KT&I sur, 700 ft from s & 150 ft from e line.

LIBERTY COUNTY—Texas Co., Houston, Yeager 3, S 5, Las Animas sur. 300 ft e of No. 2. Empire G. & F. Co., Daisetta, Baringrover 29, I. Devore sur, 454 ft from e & 564 ft from s line.

LIMESTONE COUNTY—Moutray Oil Co., Abilene, Peeples 1, W. A. Price sur, 306 ft from n & 600 ft from nw line.

LAVACA COUNTY—Texas Co., Houston, Borcher 1, E. Fagan sur, 150 ft from n & w lines.

MONTAGUE COUNTY—Continental Oil Co., Wichita Falls, Cunningham A, No. 2, T. F. Edmondson sur. Pure Oil Co., Fort Worth, Keck A, No. 4, Wm. Donoho sur, 200 ft from w & 1410 ft from s line. Hedrick-Camp Drilling Co., Wichita Falls, Lemors 1, S. Little sur, 1000 ft from w & 150 ft from s line.

MAVERICK COUNTY—Rycade Oil Corp., Houston, Sullivan 3, S 71, blk 7, I&GN sur, 520 ft from w & 2137 ft from s line.

MILAM COUNTY—Lowenstein Oil Co., Rockdale, Lowenstein 4, Wm. Allen sur, 300 ft from sc & e lines.

ORANGE COUNTY—Sinclair O. & G. Co., Houston, Leon 3, W. Dyson sur, 42 ft from n & 425 ft from w line.

PECOS COUNTY—Roxana Pet. Corp., McCamey, Smith A, 6, S 29, blk 194, GC&SF sur, 1080 ft from e & 2310 ft from n line; 7, 1008 ft from e & 990 ft from s line; 8, 2310 ft from n & 3720 ft from e line; 9, 990 ft from n & 3720 ft from e line. California Co., Colorado, Smith 4, S 23, blk 194, GC&SF sur, 990 ft from w & n lines. Roxana Pet. Corp., McCamey, Smith D. 1, S 24, blk 194, GC&SF sur, 330 ft from n & 990 ft from e line. Furman Pet. Corp., Okmulgee, Okla., Ewing 1, S 46, blk 9, H&GN sur, center.

PANOLA COUNTY—W. H. Smith, Shreveport, La., Caldwell 1, J. Womack sur, 400 ft from ne & se lines. Smith & Katz, Shreveport, La., Agurs 4, J. Lawless sur, 400 ft from s & w lines.

PALO PINTO COUNTY—Gustav Peters, Fort Worth, Weldon 1, CEPI&M Co. sur, 300 ft from s & e lines.

SHACKLEFORD COUNTY—Rover Drilling Co., Baird, Alexander 1, S 7, Bayland Asy. sur, 450 ft from n & 150 ft from w line. St. Mary's O. & G. Co., Moran, Nelson 1, S 70, L. A. L. sur, 210 ft from e & 525 ft from s line. Less Combest et al, Mineral Wells, Broyles 2, S 16, L. A. L. sur, 450 ft s of No. 1. Gober & Ranspot, Albany, Strickland 1, S 43, L. A. L. sur, 150 ft from nw & sw lines. Less Combest, Mineral Wells, Dodson 4, S 28, L. A. L. sur, 500 ft from w & 300 ft from s line; Broyles 1, S 7, L. A. L. sur, 650 ft from n & 150 ft from e line. Humble O. & R. Co., Wichita Falls, Davis A3, S 7, blk 14, T&P Ry. sur, 200 ft from n & w lines. Tom James, Albany, Mobley 8, S 59, E. T. Ry. sur, 300 ft w of No. 3. T. G. Shaw, Fort Worth, English 1, S 18, Univ. Lands sur, 450 ft from s & w lines. Crump & Marsh, Dallas, Collinsworth 1, S 12, Univ. Lands sur, 540 ft from n & 150 ft from w line. L. H. Wentz, Eastland, Reynolds 3, S 13, blk 11, T&P Ry. sur, 406 ft e of No. 1. C. W. Waddington, Fort Worth, Diller 2, S 42, L. A. L. sur, 150 ft from n & w lines. Hope O. & G. Co. & Marland Oil Co., Fort Worth, Powers 1, S 34, blk 12, T&P Ry. sur, 150 ft from s & w lines; Davis 1, S 33, blk 12, T&P Ry. sur, 150 ft from n & e lines. Crosscut Corp., Fort Worth, Broyles 3, S 14, L. A. L. sur, 300 ft e of No. 2. Phillips Pet. Corp., Bartlesville, Okla., Miles 1, S 26, Bayland Asy. sur, 660 ft from e & 300 ft from s line. A. J. Hughes, Albany, Dillingham 4, 552, TE&L sur, 460 ft from ne & 150 ft from se line. Roeser & Pendleton, Inc., Fort Worth, Cook A63, S 60, E. T. Ry. sur, 150 ft from n & e lines; A66, 495 ft from s & 750 ft from e line. Miss L. D. Hill, Fort Worth, Proctor 1, A. Rodriguez sur.

STEPHENS COUNTY—L. H. Wentz, Eastland, Elliott 1, S 55, blk 7, T&P sur, 250 ft from e & 330 ft from s line. M. H. Hagaman, Ranger, Fee 1, S 2, E. Chambless sur, 320 ft from w & 1440 ft from s line. Teci Prod. Co., Breckenridge, Sloan 1, S 17, J. Yeaman sur, 200 ft from e & 500 ft from s line. Bowden-Houston et al, Ranger, Vaughn 1, S 54, blk 6, T&P Ry. sur, 150 ft from n & w lines. Payne, Green & Barrett, Breckenridge, First Nat. Bank 1, S 444, S. P. Ry. sur, 500 ft from n & 305 ft from e line.

SHELBY COUNTY—Magnolia Pet. Co., Dallas, Pickering 3, W. J. Crane sur, 700 ft e of No. 2.

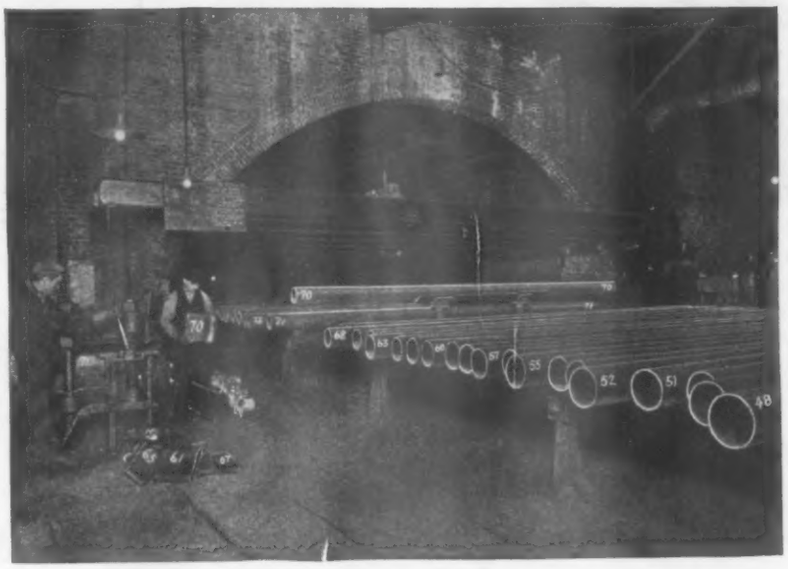
SAN PATRICIO COUNTY—C. I. Albertson, Sinton, Boscamp 1, blk 10, W. R. Hazen sur, north central. Saxet Co., Corpus Christi, White Point Gas Co. 16, D. C. Rachal sur, sw corner.

TOM GREEN COUNTY—Concho Pacific Oil Co., Christoval, Williams 1, S 75, A. Black sur, 163 ft from n & 435 ft from e line.

WICHITA COUNTY—Ryan Consolidated Pet. Corp., Bartlesville, Okla., Nance 96, S. O. Fowler sur, 340 ft sw of No. 92. Hammon & Garrett, Wichita Falls, McCarty 9, W. R. Eaves sur, west of No. 8. Magnolia Pet. Co., Dallas, Kemp 2, blk 27, W. V. F. L. sur, 300 ft n of No. 1. Hammon & Garrett, Wichita Falls, McCarty E10, W. R. Eaves sur, 150 ft from n & w lines; 8, 300 ft e of No. 9. Jno. McNeil, Wichita Falls, Roberts 5, S 16, HT&B sur, 2190 ft from w & 870 ft from s line. Douglas Bros. Oil Co., Electra, Douglas 3, S 2, SA&MG sur, 1050 ft from w & 150 ft from s line. J. H. S. Bonner, Wichita Falls, Perkins 6, P. Corrigan sur, 150 ft from s & w lines. Bonchil Co., Wichita Falls, Perkins 3, P. Corrigan sur, 300 ft n of No. 1. G. R. Anderson, Electra, Goetze 10, S 2, SA&MG sur, 250 ft from e & 900 ft from s line. Texas Co., Wichita Falls, Mangold 2, S 34, P. Castleman sur, 150 ft from n & 450 ft from w line.

WILBARGER COUNTY—E. B. Lawson, Tulsa, Okla., Waggoner Bros. 9B, S 30, blk 4, H&TC sur, 485 ft n of No. 8. Easter Oil Corp., Wichita Falls, Waggoner 1, S 126, blk 4, H&TC sur, 150 ft from n & e lines. Waggoner Ref. Co., Wichita Falls, Waggoner G2, S 24, blk 4, H&TC sur, 455 ft w of No. 1. Barkley & Meadows, Wichita Falls, Waggoner D2, S 5, blk 5, H&TC sur, 150 ft e of center of w line; Waggoner C2, S 5, blk 5, H&TC sur, 320 ft from n & w lines. Easter Oil Corp., Wichita Falls, Waggoner B1, S 39, MEP&P sur, 220 ft from s & e lines. Waggoner Ref. Co., Electra, Waggoner F6, S 25, blk 4, H&TC sur, 205 ft from n & w lines. J. B. Baker, Jr., Wichita Falls, Waggoner 1, Purnell & Calhoun sur, 150 ft from s & e lines. Waggoner Ref. Co., Electra, Waggoner H2, S 24, blk 4, H&TC sur, 186 ft from n & e lines; Waggoner 11, S 33, blk 4, H&TC sur, 205 ft from s & e lines; 12, 404 ft w of No. 1; Waggoner H1, S 24, blk 4, H&TC Ry. sur, 205 ft from n & w lines. Petroleum Prod. Co., Wichita Falls, Waggoner 40, 5A, S 16, blk 4, H&TC sur, 700 ft from e & 200 ft from s line. Prairie O. & G. Co., Ranger, Waggoner B6, S 44, blk 4, H&TC sur, 467 ft from n & 1375 ft from w line; Waggoner A9, S 45, blk 4, H&TC sur, 467 ft from w & 1153 ft from s line. Pigg & Murchison, Vernon, McCrary 1, S 64, blk 14, H&TC sur, 150 ft e of center of w line. Hamilton & Martin, Wichita Falls, Waggoner A2, S 5, blk 5, H&TC sur, 300 ft n of No. 1. Bass & Dillard, Wichita Falls, Waggoner 1, S 5, blk 5, H&TC sur, 150 ft from s & e lines.

WINKLER COUNTY—Atlantic Oil Prod. Co., Dallas, Hendrick F8, S 40, blk 26, 1320 ft from n & 330 ft from w line; F9, 2200 ft from n & 330 ft from e line; F10, 1320 ft



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DISTRICT OFFICES:

Tulsa, Oklahoma, J. D. Swartz, 247 West 13th St., Tulsa, Oklahoma.
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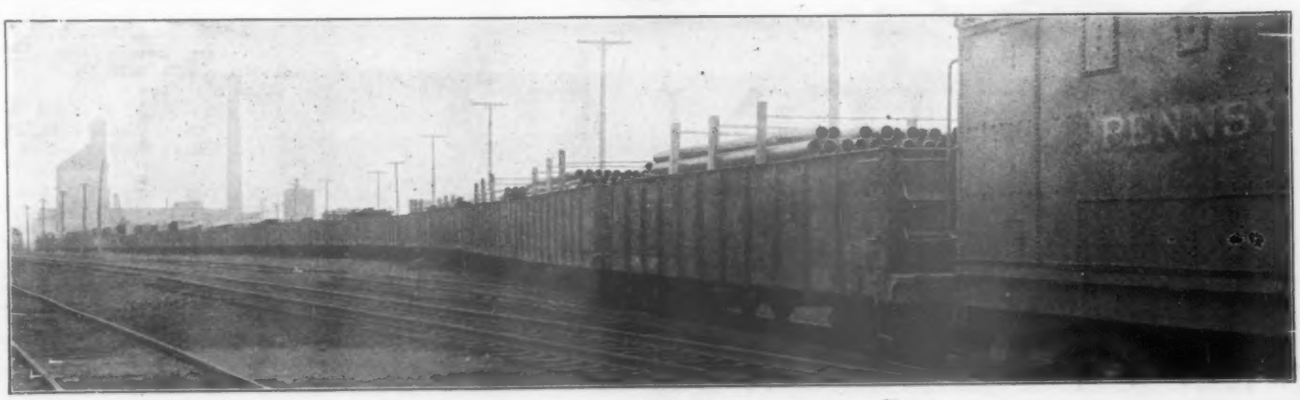
CHESTER LINE PIPE



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The men who have spent years walking the derrick floor can tell you about Burns Dependability.

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OKMULGEE - OKLAHOMA

from n & 330 ft from e line; Hendrick G3, S 46, blk 26, 440 ft from n & 2310 ft from w line.. G4, 1320 ft from w & 2200 ft from n line. Roxana Pet. Corp., South Bend, Hendrick A5, S 45, blk 26, 330 ft from w & 1320 ft from s line; Hendrick G1, S 39, blk 26, 330 ft from w & 440 ft from s line. Humble O. & R. Co., Wichita Falls, Hendrick B4, S 39, blk 26, 330 ft from e & 440 ft from s line. Landreth Prod. Corp., Breckenridge, Hendrick A7, S 29, blk B5, nw corner; Cowden 2, S 3B, blk 12, ne corner; Grisham-Hunter 3, S 45, blk 26, 330 ft from w & 1320 ft from s line; 4, 440 ft from e & 1320 ft from s line; Hendrick 3, S 40, blk 26, sw corner. Gulf Prod. Corp., Fort Worth, Hendrick 25, S 34, blk 5B, 660 ft w of No. 11; 36, 660 ft w of No. 12. Amerada Pet. Corp., Cisco, Cowden 1, S 3, blk B12, 330 ft from n & w lines. Texon Oil & Land Co., Big Lake, Hendrick 5B, S 45, blk 26, 330 ft from w & 1320 ft from s line. Republic Prod. Co., San Angelo, Hendrick 4B, S 42, blk 5, 330 ft from n & 990 ft from e line. Atlantic Oil Prod. Co., Dallas, Hendrick F11, S 40, blk 26, 1320 ft from n & 990 ft from w line. Roxana Pet. Corp., Dallas, Hendrick F3, S 46, blk 26, 440 ft from n & 1320 ft from s line. Independent O. & G. Co., Midland, McCabe 2, S 36, blk B5, 2310 ft from n & 990 ft from w line; 3, 2970 ft from w & 990 ft from n line. F. S. Vanden, Jr., San Antonio, Vanden 1, S 35, blk 26, 189 ft from n & 155 ft from w line; 2, 2440 ft from w & 175 ft from s line; 3, 230 ft from w & 290 ft from s line; 4, 2270 ft from e & 1584 ft from s line; 5, 1530 ft from e & 1560 ft from s line.

WEBB COUNTY—O. W. Killam, Laredo, Bruni 14, blk 64, Arriba sur, ne of No. 13. Wm. R. Jewell, Laredo, Bruni 1, blk 56, Arriba sur, 150 ft from e & 1170 ft from s line. Magnolia Pet. Co., Dallas, Yeager 3, S 5, Las Animas sur, 300 ft e of No. 2. Aviator Gas Co., Mirando City, Bruni 1, S 2083, GC&SF sur, 1400 ft from s & e lines.

WHEELER COUNTY—Pendleton & Vaughan, Shamrock, Wooley 1, S 21, blk 24, H&GN sur, center.

YOUNG COUNTY—Nash & Windfohr Oil Corp., Wichita Falls, Hinson 5, P. Pier sur, 285 ft from n & w lines. T. R. Casey, Graham, Brainard 1, 1923, TE&L sur, 1375 ft from w & 150 ft from s line. C. M. Root, Eastland, Shanafelt 1, S 12, H. A. McComber sur, 300 ft from w & 2340 ft from s line. G. A. Gifford, Abilene, Miller 1, blk 7, A. Rohus sur, 550 ft from e & 150 ft from n line. Panhandle Ref. Co., Wichita Falls, Willett 1, 1977, TE&L sur, 150 ft from s & 1500 ft from e line. D. F. Ford, Loving, Barrett 1, E. W. Sargent sur, 150 ft from n & w lines. T. F. Hunter, Wichita Falls, Thomas 1, 1901, TE&L sur, 1050 ft from n & 150 ft from w line. Petroleum Prod. Co., Wichita Falls, Wilson 1, 76, TE&L sur, 150 ft from e & 422 ft from s line. Wooten & Reed, Graham, Young County Lumber Co. 1, W. W. Porter sur, 150 ft from w & 1793 ft from n line. Bert Ehorn et al, Graham, Garvey 2, No. 3, G&BN sur, 300 ft nw of No. 1.

ZAPATA COUNTY—R. V. Hill, San Antonio, Ramirez 1, No. 627, T. Burtang sur, 300 ft from nw & 150 ft from ne line.

LOUISIANA

CADDO PARISH — Dixie Oil Co., Inc., Shreveport, Dillon 93, 14-21n-15w, 1775 ft n and 575 ft e of sw c se¼. Magnolia Pet. Co., Shreveport, Levee Board 3, 7-20n-15w, 150 ft s and 480 ft w of ne c nw ne. Warren & Caruthers, Chicago, Mrs. E. A. Berry 1, 26-15n-15w, 1980 ft s and 660 ft e of nw c.

CALCASIEU PARISH—L. Siess Oil Syndicate, Lake Charles, Green Sanborn 10, 34-10s-12w, 80 ft s of nw c and 25 ft e of w l lot 94 in sec 34.

CAMERON PARISH—Calcasieu Oil Co., Inc., Magnolia Pet. Co. and Union Sulphur Co., Houston, Watkins 7, 24-12s-10w, 3300 ft e and 1005 ft s of nw c; Watkins 8, 24-12s-10w, 2407 ft e and 1386 ft s of nw c. Yount-Lee Oil Co., Beaumont, Texas, State Land 14, 36-12s-10w, 780 ft e and 840 ft n of sw c; State Land 15, 36-12s-10w, 930 ft n and 670 ft e of sw c; State Land 16, 24-12s-10w, 330 ft w and 295 ft n of sw c sec 36-12s-10w, in sec 24.

EAST CARROLL PARISH—Woodley Pet.

EMSCO STEEL EQUIPPED WELLS ARE SAFE

SAVES *time, labor, wear and tear*

The most efficient counterbalance available today

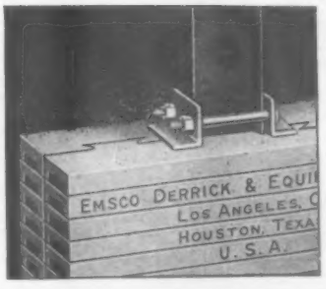
THE pitman is the correct position for a counterbalance weight. For this reason the Emsco-Kammerer Pitman Weighted Counterbalance has been developed.

Placing the counterbalance weights on the pitman overcomes the many difficulties encountered with the usual methods. The band wheel type, although satisfactory to a degree if accurately installed, has many drawbacks. The weights being fastened by bolts to the side of the band wheel results in an off-center strain which racks the entire wheel. The wider the face of the band wheel, the greater the strain. Sooner or later this strain will cause loose rivets, as well as loosening of the hub on the shaft, wear on bearings, and possibly, breakage of the shaft.

With the band wheel type of counterbalance, much time and labor are involved in placing the weights in a neutral position when the well is to be pulled; all of which is eliminated with the Emsco-Kammerer Counterbalance.

As the Emsco-Kammerer Pitman Weighted Counterbalance is securely fastened to the pitman, it is just as easy to connect and disconnect this pitman as any ordinary type. During a recent field test, the actual time required for disconnecting was only three minutes; for connecting only four minutes.

The Emsco-Kammerer Pitman Weighted Counterbalance saves time and labor, wear and tear on machinery, and does not in any way cause damage to the band wheel. It is not an experiment. It is the simplest and most efficient counterbalance available today and its value has been definitely proved over a period of months, in different oil fields under varying conditions of service. Complete data and information supplied on request.



Showing how the two halves of the counterweights dovetail together; also recesses in ends of weights to facilitate handling

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Pitman Weighted Counterbalance

{PATENT PENDING}

Co., Shreveport, Garden Home Co. 1, 4-19n-12e, 264.66 ft s and 689.70 ft e of nw cor of sec.

MOREHOUSE PARISH—Natural Gas Prod. Co. of La., Bastrop, Taylor-Sandidge 1, 12-20n-4e, 2850 ft e and 159 ft s of nw c.

POINTE COUPEE PARISH—Freun, Edmonson & Booth, Morgansa, Fairview Plantation 1, Twp. 3s-rge-8e, approx. 500 ft e and 300 ft s from nw c Fairview Plantation in t 3s-r8e.

WEBSTER PARISH—Palmer Corp. of La., Shreveport, Tillman 3, 28-21n-10w, 660 ft w and 580 ft s of ne c.

WINN PARISH—H. A. Sackrider, Tr., Tullos, Nelson 1, 26-11n-1w, 200 ft s and 200 ft w of center.

ARKANSAS

UNION COUNTY — Amerada Pet. Corp. Ezell 1, 3-17-14, 330 ft n and 330 ft w of se c of skw sw. O. W. Estes, Rowland 2, 14-17-14, nw c sw nw. Hollyfield et al, McCain 1, 4-17-14, se c ne se. Magna Prod. Co., Dumas 6, 11-17-14, se c ne nw sw; Rowland B-2, 14-17-14, 100 ft e and 90 ft s of nw c; Townsend 4, 10-17-14, nw c e½ nw ne. C. E. Murdock, Dumas 2, 11-17-14, 150 ft s and 150 ft w of ne c se nw sw; Dumas 3, 11-17-14, 150 ft n and 150 ft e of sw c se nw sw. Oil Well Corp., Ezell 1, 3-17-14, sw c se sw; Perdue A-1, 10-17-14, center of e l s½ sw nw; Perdue A-2, 10-17-14, ne c sw nw; Perdue B-1, 10-17-14, se c nw nw; Perdue B-2, 10-17-14, ne c nw nw. Pure Oil Co. J, Gregory 2, 11-17-14, nw c s½ ne sw; J. M. Gregory 5, 11-17-14, sw c ne sw. Root Ref. Co., E. F. Gregory 2, 10-17-14, nw c ne sw. Rovenger Oil Corp., Perdue 2, 10-17-14, 330 ft n and 330 ft e of sw c ne nw; Perdue 3, 10-17-14, 330 ft s and 330 ft e of nwc ne nw. Skelly Oil Co., Perdue 3, 10-17-14, sw c se nw; Perdue 4, 10-17-14, se c se nw. Sun Co., Schmidt B-1, 16-17-14, 150 ft s and 150 ft e of nw c se ne.

WILDCATS FROM ALL SECTIONS

WEST TEXAS

GARZA COUNTY—		
Marland Prod. Co., Pippen 1.....	*	3582
LOVING COUNTY—		
Delaware Oil Co., Lockhart-Ramsey 1	*	4426
Lockhart & Co. et al, Fee 2.....	50	4270
PECOS COUNTY—		
World Oil Co., M. Cerf 1.....	*	3505
RUNNELS COUNTY—		
Marland Prod. Co., Russell 1.....	*	3060
WARD COUNTY—		
Selby O. & G. Co. et al, Dooley-Rogers 1	*	3630

ANDREWS COUNTY—Deep Rock Oil Co.'s Harris 1, elev 3173 ft, top salt 1705 ft, dr 3390 ft.

BORDEN COUNTY—E. L. Doheny et al's Koonsman 1, rig.

BREWSTER COUNTY — Cowden-Cole et al's Jackson-Harmon 1-A, dr 745 ft. Forrest Oil Co.'s Skinner 1, set cas 1108 ft. Reese & White's Kimball 1, sd 1807 ft.

COKE COUNTY—Lipan Oil Co.'s Conner 1, co 3315 ft; Rawlings 1, dr 2810 ft.

CONCHO COUNTY—Douglas Oil Co. et al's Harral 1, dr 1725 ft.

CRANE COUNTY—Church & Fields' University-Duoll 2, dr 420 ft. C. C. Duffey et al's Cowden 1, trace oil 2170 ft, top salt 1010 ft, dr 2300 ft. Gulf's Waddell 4, elev 2735 ft, top salt 1185 ft. dr 2955 ft. J. K. Hughes Dev. Co.'s State Bank 1, elev 2463 ft, top salt 525 ft, dr 1940 ft. Humble's University 1-C, top salt 1035 ft, swab 200 bbls oil 2850-2921 ft. T&P Coal & Oil Co.'s University 1, top salt 1140 ft, top lime 2850 ft, dr 2880 ft. The Texas Co.'s University-Gafford 2, top salt 1005 ft, top lime 2809 ft, flowed 170 bbls, dr pay 2915-30 ft.

CROCKETT COUNTY—Geo. H. Anderson & Williams' University 1, elev 2610 ft, top salt 990 ft, top lime 2000 ft, dr show oil 2080-87 ft. The California Co.'s Powell 1, top salt 1045 ft, dr 1535 ft; Powell 2, elev 2792 ft, top salt 1084 ft, dr 2235 ft. Hal Compton & Co.'s University 1, dr 550 ft. W. W. Donnelly et al's Massie 1-A, dr 255 ft; Todd 1, set cas to test good show oil and gas, td 1681 ft; Shannon Middlebuster 2, (Sec. 18) dr 120 ft; Shannon-Powell 1, (Sec. 42) spud and sd. Furhman Pet. Corp.'s Padgett 1, lcn. Gulf Prod. Co.'s Powell 3-D, elev 2794 ft, top salt 1085 ft, dr 2240 ft; Thompson 1-A, elev 2227 ft, top salt 420 ft, top lime 1715 ft, dr 2250 ft. Humble & Marland's Powell 4-B, elev 2679 ft, top salt 1040 ft, dr 2275 ft. McMan O. & G. Co. & Amerada Pet. Corp.'s Powell 1, dr 725 ft. Marland & Pecos Oil Co.'s University 1, set cas 1360 ft. Renee Oil Co.'s University 1, elev 2692 ft, top salt 1100 ft, dr 1895 ft. Republic Prod. Co.'s Powell 1-B, elev 2723 ft, top salt 1045 ft, sd 2115 ft. W. R. Simmons & Marland's University 1, elev 2522 ft, top salt 875 ft, sd 1130 ft. Taylor Link Oil Co. & Kirby Pet. Co.'s Powell 2, elev 2747 ft, top salt 1070 ft, ur 2490 ft; Peck 1, elev 2379 ft, top salt 910 ft, dr 1255 ft. Tidal Oil Co.'s University 1, top salt 1220 ft, dr 1960 ft. Transcontinental Oil Co.'s Atwood 1, elev 2555 ft, top salt 513 ft, top lime 1890 ft, dr 2125 ft. P. R. Whonlich & Co.'s Shannon 1, lcn.

CULBERSON COUNTY — Deep Rock Oil Co.'s Dettis 1, dr 505 ft. Dittman Drlg. Co.'s Miller 1, sd 1767 ft. J. M. Hickey et al's Finley 1, trace oil 1380-84 ft, fsh 1385 ft.

JEFF DAVIS COUNTY—Humble's C. Flores 1-A, elev 4239 ft, dr 5056 ft. Sam. F. Means et al's J. Z. Means 1, sr 2850 ft.

ECTOR COUNTY—Texas Co. et al's Connell 6, elev 2876 ft, top salt 950 ft, top lime 3233 ft, trace oil 3486-90 ft, dr 3700 ft.

EL PASO COUNTY—C. E. Sillix et al's Malone 1, dr 865 ft.

FISHER COUNTY — Cranfill-Reynolds & Sun Oil Co.'s Willingham 1, dr 1660 ft. Mid-West Explo. Co.'s Decker 1, lcn. Rainey & Little's Marberry 2, elev 1929 ft, top lime 2995 ft, ur 5-inch cas with show oil and water 3285-89 ft. Roeser-Pendleton, Inc.'s Decker 1, dk. Texas Unity Oil Co.'s Reddus 1, lcn.

GARZA COUNTY—Emerald Oil Co.'s J. M. Boren 3, elev 2363 ft, sd 4455 ft. Latimer & Waggoner's Cross 1, lcn.

GLASSCOCK COUNTY — Landreth Prod. Corp.'s Houston 2, spudding. Meriwether Oil Co.'s McDowell 2, elev 2522 ft, top salt 1000 ft, top lime 2510 ft, dr 2880 ft. Roxana Pet. Corp.'s Boston 1, dr 1760 ft. World Oil Co.'s McDowell 1-B, elev 2523 ft, dr 155 ft.

TOM GREEN COUNTY — Tinker et al's Jones 1, sd 350 ft. McLaughlin & Ridge's Holder 1, 2235 ft.

HOWARD COUNTY—Amerada & Rycade Oil Corp.'s Roberts 1, dr 1100 ft; Stewart 1, dr oil sand 1412-40 ft. Bristow & Merrick's Hooks 5, est. 50 bbls oil 1869-84 ft; Hooks 6, sd 1574 ft; Hooks 7, dr 1265 ft. J. S. Cosden & Co.'s Roberts 1-A, dr oil sand 1512-42 ft; Roberts 2-A, dr 1415 ft; Roberts 3-A, spudding; Roberts 4-A, lcn. W. W. Donnelly et al's Clay 1, dr 1485 ft. F-H-E Oil Co.'s Roberts 1-C, sd 1960 ft. F-H-E Oil Co. & Moody Corp.'s Roberts 1-E dd, dr 1350 ft; Roberts 3-E, dr 245 ft. Godley O. & G. Co.'s Hooks 5, dr 1200 ft. Gulf's Clay 1, co with 900 ft oil 3874-98 Greene O. & R. Co.'s Clay 1, flowing 100 bbls. oil 1755-67 ft. Henshaw et al's Eason-Settles 1, co 1925 ft. Laurel O. & G. Co.'s Read 1, fsh 850 ft. Magnolia Pet. Co.'s H. Hyman 1, elev 2360 ft, plug back from 3615 to 2220 ft; O'Daniel 2, spudding; Roberts 4, elev 2704 ft, dr 1550 ft; Roberts 7, elev 2769 ft, cem cas 1804 ft; Roberts 8, cem cas 1906 ft. Marland Prod. Co.'s Chalk 3-E, dr 1225 ft. Mays-Nixon et al's Flowers 1, elev 2497 ft, sd 2517 ft. Merrick & Lamb's Clay 4, dr 1010 ft. Owen-Sloan Oil Co. & Cosden & Co.'s Roberts 4, elev 2744 ft, top lime 2050 ft, cem cas 2460 ft; Roberts 5, dr 1065 ft. Pure Oil Co.'s Chalk 5, rig. Sun Oil Co.'s Settles 2, dr 2710 ft.

HUDSPETH COUNTY—Western States Oil Co.'s Gardner-Mosley 1, dr 2815 ft; S. W. Moore 1, sd 2330 ft.

IRION COUNTY—Empire G. & F. Co.'s Sawyer 1, spudding. Kimbrough & Tuel's Nutt 1, sd 1155 ft. Pat Markey et al's Thomson 1, rig. Mertzon Oil Co.'s Roach 1, dr 730 ft. L. P. Powell et al's Horney 1, dr 1010 ft. F. E. Webb et al's Nutt 1, elev 2354 ft, ur 1655 ft. W. West et al's Suggs 1, spud ad sd. Wittmer O. & G. Properties' Mayer 2, elev 2035 ft, dr 1350 ft.

JONES COUNTY — Campbell & W. G. Clark's Dickinson 1, spudding. Campbell et al's J. R. Berry 1, lcn. Cowboy Evans et al's King 1, dr 615 ft. Hucony Gas Co. et al's Tiner 2 and 3, lcns. Hurley Oil Co.'s Gunther 1, dr 1255 ft. Pandem Oil Corp.'s S. R. Cox 1, lcn. Phillips Pet. Co.'s Mason 3, dr 1110 ft; Sharp 1, dr 460 ft; Winters 3-A, dr 2145 ft; Winters 6, ur 3620 ft. Robert Oil Corp. & Cosden & Co.'s Grayson 1, spudding; Grayson 2, rig; Grayson 3, lcn. Roeser-Pendleton, Inc.'s Grayson 1, machine. Snowden & McSweeney's Bickley 1, spudding. Roeser-Pendleton & Stebbins O. & G. Co.'s Higgs 2, sd 1840 ft. Texas & Wheeler's H. Sayles 1, trace oil 2070-76 ft and ur cas. Texas Co. & Cosden & Co.'s L. Carter 1, rig.

KENT COUNTY—J. S. Cosden & Co.'s Bilby 1, ur with hfw 320 ft. Phillips Pet. Co.'s Sandell 1, dk.

KING COUNTY—Humble's Pitchfork 1, dr by junk 4035 ft. Texas Co.'s Johnson 1, dr 1070 ft.

LOVING COUNTY—Lockhart & Co.'s Bowers-Wells 1, dr 615 ft; Hubbard 1, rig; Fee 1, sd 3000 ft. Hadlock Oil Co.'s Russell 2, top salt 750 ft, dr 1765 ft.

LYNN COUNTY—Elpo Oil Co.'s Nevels 1, top salt 2570 ft, dr 2880 ft.

MARTIN COUNTY — Phillips Pet. Co.'s Slaughter 1, elev 2726 ft, top salt 1685 ft, dr 2685 ft.

MENARD COUNTY—Carpenter & Robbins' Kothman 2, fsh 635 ft. Moody Corp.'s Allison 1, elev 2053 ft, dr 2605 ft. Panhandle Ref. Co. & Silk's Eckhardt 1, dr 1230 ft. Sorrels et al's Wilhelm 1, spd and sd. May & Clark's Rasmussen 1, ur 850 ft. Menard Drlg. Co.'s Davis 1, dr 435 ft.

MIDLAND COUNTY—O. H. Shoup et al's Parks 1, elev 2871 ft, top salt 1740 ft, dr 2825 ft.

MITCHELL COUNTY—Hucony Gas Co.'s Weichsel 1, dk. Owen-Sloan's Boren 1, sd 910 ft.

NOLAN COUNTY—Herbert Oil Co.'s Pepper 1, rig.

PECOS COUNTY — Amerada Pet. Corp.'s Dillon 1, trace oil with water 1235-38 ft. G. H. Anderson et al's University 1, elev 2801 ft, top salt 1030 ft, top lime 1715 ft, sd 1880 ft. Alexander & Lyles' Sellman 1, fsh 580 ft. Bateman & Price's River Bed 1, elev 2227 ft, top salt 565 ft, dr 920 ft. Benedum & Trees' Corder 1-A, dr 355 ft. Diamond Pet. Co.'s Blackstone-Slaughter 1, sd 1075 ft. M. Z. Dibble et al's Bonebrake 1, elev 2555 ft, sd 1170 ft. Ditto

New Mexico Lease Deal

Albuquerque, N. M.—Amerada Corporation and the Columbia Carbon Company have purchased from Texas Production Company a one-third interest in the Lea County holdings of the last named in New Mexico. This property includes 9000 acres, and will be operated jointly by the three companies. The deal foreshadows the establishment by Columbia Carbon Company of several carbon black plants in the State.

What Happens?

—When Your Machinery Starts and Stops

Much of the wear and tear on machinery comes from starting and stopping. For then the fluid film of lubrication is broken, ***and unless you are using the right lubricant,*** friction takes a heavy toll.

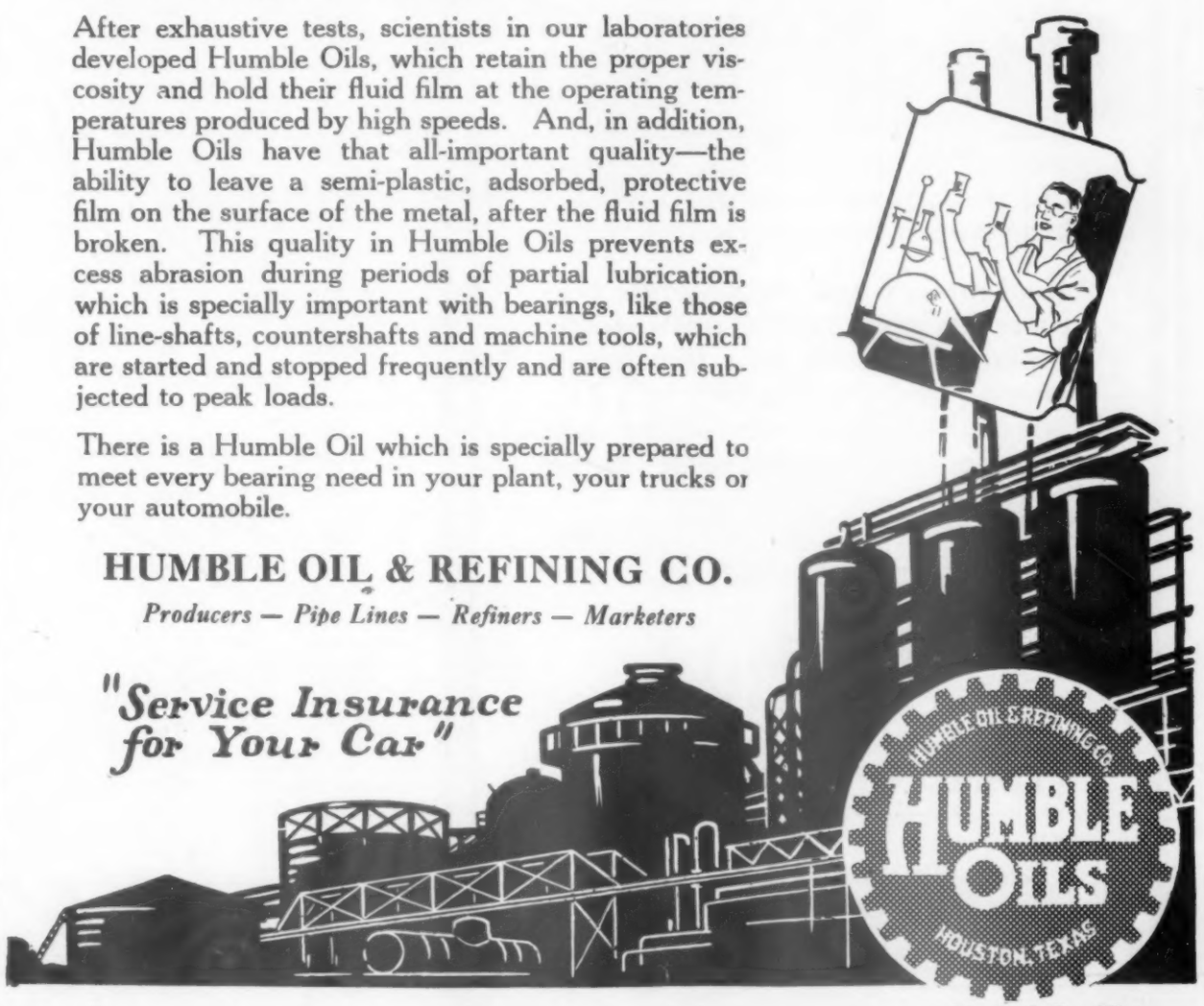
As long as the fluid film is intact, the quality of the lubricant is not so important—but when the fluid film breaks, as it does every time you start and stop a machine—the quality of the lubricant supplied to the bearings is of prime importance, if friction is to be kept from doing serious damage.

After exhaustive tests, scientists in our laboratories developed Humble Oils, which retain the proper viscosity and hold their fluid film at the operating temperatures produced by high speeds. And, in addition, Humble Oils have that all-important quality—the ability to leave a semi-plastic, adsorbed, protective film on the surface of the metal, after the fluid film is broken. This quality in Humble Oils prevents excess abrasion during periods of partial lubrication, which is specially important with bearings, like those of line-shafts, countershafts and machine tools, which are started and stopped frequently and are often subjected to peak loads.

There is a Humble Oil which is specially prepared to meet every bearing need in your plant, your trucks or your automobile.

HUMBLE OIL & REFINING CO.

Producers — Pipe Lines — Refiners — Marketers



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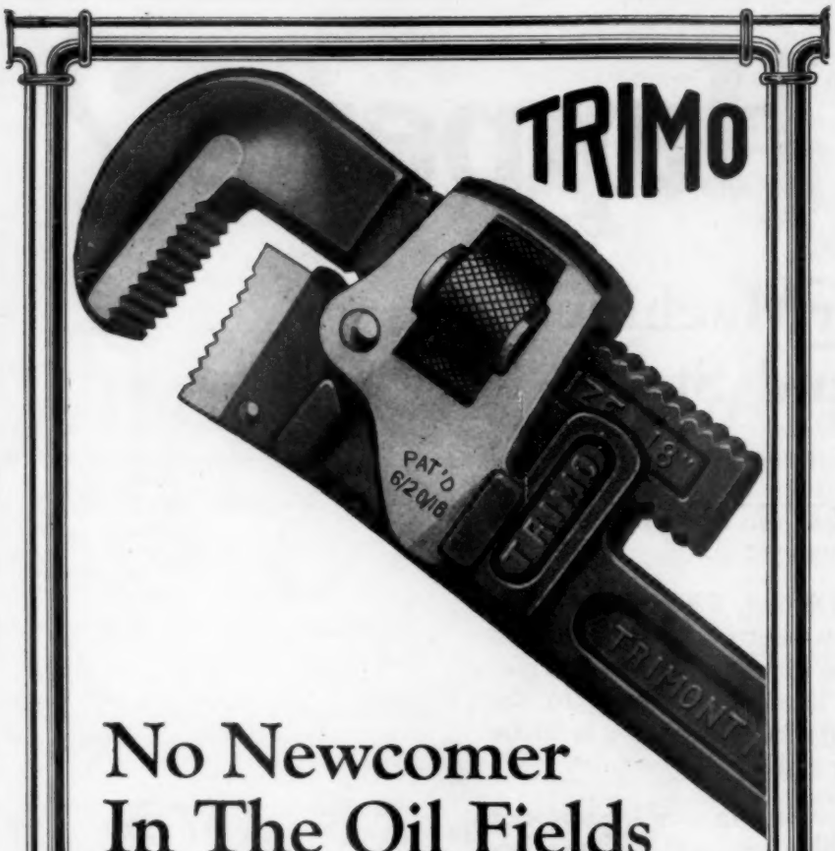
Reg. U. S. Pat. Off.



No Newcomer In The Oil Fields

TRIMO Pipe Wrench is no "boll weevil" in the oil fields. Oil men old and young recognize TRIMO as a veteran worker, tried and true.

Real quality and worthwhile features have put TRIMO in the lead: replaceable insert jaws, handy nut guards, and on the 14", 18", 24", 36" and 48" sizes, reinforcing side lugs that overlap the steel frame.

When You Want A Pipe Wrench, Buy A

TRIMO

TRIMONT MFG. CO., INC.
Roxbury (Boston) Mass.

Leading Wrench Makers of America For Over Forty Years

Oil Co.'s Montgomery 1, spud and sd. Cowboy Evans & O. R. Reed's S. Byrens 1, dr 550 ft. Bib Kilmore et al's M. Holmes 2, elev 2150 ft, dr 1450 ft. Farrell et al's University 1, dr 45[illegible] ft. Fuhrman Pet. Corp.'s Ewing 1, spudding. Mays-Nixon et al's Perry 1, dr 630 ft. Mid-Kansas O. & &. Co.'s Pryor 1, elev 2790 ft, top salt 1465 ft, top lime 3200 ft, fsh 3330 ft. Olean Pet. Co.'s Harral 1, dr 675 ft. Phillips Pet. Co.'s Heyman-Nutt 1, elev 2943 ft, dr 1530 ft. Roxana & Kirby's University 1, elev 2620 ft, dr 2230 ft. Southern Crude Oil Pur. Co.'s Scharbauer 1, elev 2680 ft, set cas 2140 ft. Sun Oil Co.'s University 1, dr 710 ft. B. J. Spikes et al's Brown 1, elev 2387 ft, sd 665 ft. Transcontinental Oil Co.'s University 1, elev 2552 ft, top lime 1035 ft, dr 2955 ft. Vacuum Oil Co.'s Elsinore 1, elev 3554 ft, hfw dr 3440 ft. World Oil Co.'s Kloh 1, elev 2810 ft, sd 2010 ft.

PRESIDIO COUNTY — Empire-Delmar et al's Tootle 1, rig.

REAGAN COUNTY — Hebert Oil Co. & Moody Corp.'s Walters 1, elev 2765 ft, top salt 1120 ft, set cas 2070 ft. Roxana's University 1, elev 2674 ft, top salt 1120 ft, top lime 2393 ft, dr 2755 ft. Texon O. & L. Co.'s University McBurnett 1, dr 1165 ft; University 1-B, (Deep test) fsh with hfo 8230 ft.

REEVES COUNTY—Eastland Oil Co., Vacuum & Geo. Lyles' Campbell 1, rig. Exploration Co. et al's Kinney 1, elev 2847 ft, cas col 2900 ft. E. W. Brooks-Thompson et al's Eddins 1, elev 2719 ft, dr hfw 5605 ft. McRobie et al's Bell 1, sd 440 ft.

RUNNELS COUNTY — Agnew & Fields' Russell 1, dr 1735 ft. Gibson-Johnson's Rainwater 1, dr 670 ft. H. L. Griswold & Royal Pet. Co.'s Willingham 1, dr 2440 ft. Hamilton et al's Spill 1, materials. Henry B. May et al's Schneider 1, elev 1666 ft, dr 2300 ft. Marland & E. L. Smith Oil Co.'s Herring 1-A, ur 2756 ft. Pure Oil Co.'s Giesecke 1, rig. R. B. Summers et al's Reese 1, sd 1655 ft. Vacuum Oil Co. et al's Flannagan 1, elev 1767 ft, salt water 2540-50 ft, dr 2725 ft; Fowler 1, elev 1706 ft, cem cas 1579 ft. Robt. Watchorn et al's King 1, elev 1660 ft, sd 3732 ft.

SCHLEICHER COUNTY—Long Bros. et al's Williams 1, rig.

SCURRY COUNTY—R. B. Pender-Dieckman et al's F. C. Davis 1, rig. J. B. Mims et al's Koonsman 1, rig.

STERLING COUNTY—Manhattan Oil Co. et al's Ellwood 1, spd and sd.

STONEWALL COUNTY — Henshaw Oil Corp. et al's Moore 1, dr 2535 ft.

SUTTON COUNTY—Phillips Pet. Co.'s Holman 1, rig.

TERRELL COUNTY—Big Bend Oil Co.'s Bassett 1, rig. Champlin Ref. Co.'s Carter 1, elev 2884 ft, dr 2950 ft. Deep Rock Oil Co.'s Noelke 1, elev 2405 ft, top lime 1130 ft, dr 3075 ft. Humble's University 1, elev 2284 ft, dr 4265 ft. Milham Corp.'s Bassett 1, elev 2270 ft, dr 2610 ft. Miller Bros. et al's Allison-Murke 1, spd and sd.

UPTON COUNTY—Atlantic et al's Elkins 1, dr 3620 ft. Buell-Hagan et al's Robbins 1, rig. Mark Curtis et al's Giddings 2, top salt 1595 ft, dr 1815 ft. Marland & K. H. Wentz's Timms 1, set cas 860 ft. F. P. Zech et al's Union 1, dr 1090 ft; Union-Murphy 1, lcn.

VAL VERDE COUNTY—Magnolia's Whitehead 2, dk. Val Vert Oil Corp.'s Bassett 1, rig.

WARD COUNTY—Estex Oil Co.'s Estes 1, elev 2508 ft, top salt 645 ft, top lime 2770 ft, fsh 2915 ft. Denver Prod. & Ref. Co.'s Cherokee Fee 1, sd 1110 ft. Rector Oil Co. et al's State Fee 1, top salt 535 ft, dr 2180 ft.

WINKLER COUNTY—Amerada Pet. Corp.'s Walton 1, elev 2833 ft, sd making 50 million gas, td 2502 ft. V. T. Bolin & Co. et al's Brown 1, elev 2847 ft, top salt 1302 ft, trace oil, dr 3171 ft. Danciger O. & R. Co. et al's Sealy 1, top salt 1085 ft, top lime 3115 ft, plug back from 3501 to 3265 ft. Flandell Oil Co.'s Carter 1, spd and sd. Gibson-Johnson et al's Leck-Daugherty 1, elev 2883 ft, top salt 1980 ft, top lime 2687 ft, sd for pipe line, td 3167 ft. Humble's Walton 1-B, elev 2844 ft, top salt 890 ft, top lime 2342 ft, show gas 2421-78 ft, dr 2690 ft. Roxana & Llano Oil Co.'s Scarborough 3, elev 2939 ft, top salt 1280 ft, fsh 2570 ft. Sid Richardson et al's Stockton Fee 1, dr 395 ft. TP Coal & Oil Co.'s Lum Daugherty 1, rotary rig. Texon O. & L. Co.'s Walton 1-B, rig.

LEA COUNTY—New Mexico-Marland Prod. Co. & The California Co.'s J. S. Eaves 1, Sec. 19-26s-37e, elev 2960 ft, top salt 1173 ft. top

Athey's *are* Built *for* Tough Hauls!

One of the users of Athey Truss Wheel Wagons kept careful comparative records for three months of the loads carried by ordinary round wheel equipment as against loads carried by Athey Wagons.
He found that with the same hauling equipment under identical conditions, ATHEYS HAULED 76% GREATER LOADS DAILY WITH LESS TRACTIVE POWER.

That's why ATHEYS are used on the tough hauls. They haul capacity loads, rain or shine, every day, regardless of actual road conditions—through deep mud, and soft going where round wheel equipment cannot operate.

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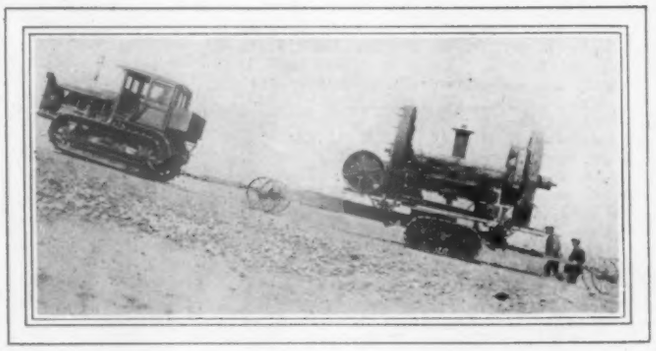

This scene shows the same train going up a sharp up grade. That's when the light running qualities of Athey Wagons pay heavy dividends.

ATHEY TRUSS WHEEL WAGON
IT BRIDGES THE SOFT SPOTS

lime 2620 ft, mudded off 90 million ft gas, 2927-68 ft, dr ahead; M. F. Sholes 1, Sec. 19-258-37e, top salt 1045 ft, top lime 2584 ft, installing connections, making 10 million ft sulphur gas 2748 ft; Lynn-Government Permit 7, Sec. 26-23s-36e, lcn; Danciger-Government Permit 6, Sec 7-23s-36e, lcn. Mid-West Exploration Co.'s State-Permit 1, Sec 9-19s-38e, co with hfo in lime 4066 ft.

ARKANSAS

UNION COUNTY—
E. M. Jones' Stegall 1, 22-17-14.... * 3711
Ohio Oil Co.'s Pumphrey 2, 1-17-14. * 3247
Ohio Oil Co.'s Townsend 1, 10-17-14 . .....location abandoned

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ASHLEY COUNTY—South Arkansas Nat. Gas & Fuel Corpn's Holmes 1, 9-16-7, dk.

BRADLEY COUNTY—Joe Hurley's Southern Lbr. Co. 1, 26-15-10, sd 21 ft.

CLARK COUNTY—W. M. Henry Tr's Clark 1, 34-9-21, sd 1200 ft. McKenzie Oil Co.'s Eaken 1, 9-11-19, dr 1460 ft.

CHICOT COUNTY—Joe Crawford et al's Cashion 1, 14-18-2, dr 360 ft. S. D. Hunter's Lytle 1, 9-19-3, dk.

COLUMBIA COUNTY—Atlantic Co.'s Jean 1, 11-19-19, dr 1300 ft. Geo. Dawley's Gantt 1, 12-17-22, sd 2520 ft. Mitchell et al's Franks 1, 25-19-22, sd 150 ft. VanHagen Synd's Pickler 1, 19-19-22, sd 850 ft; Mason 1, 31-19-22, rig.

DALLAS COUNTY—Dedman et al's Hillman 1, 20-10-13, sd 1100 ft.

GRANT COUNTY—Jones & Watkin's Meek 1, 5-4-11, sd 1400 ft.

LINCOLN COUNTY—Pine Prairie O. & G. Co.'s Carter 1, 33-10-6, sd 2176 ft.

LITTLE RIVER COUNTY—Grote et al's Allen 1, 31-12-31, sd 2941 ft.

NEVADA COUNTY—Humble's Mixon 1, 6-14,20, lcn.

OUACHITA COUNTY—Buffalo Oil Co.'s Laughlin 1, 22-15-19, dk. Timberlake et al's Carnes 1, 27-13-17, sd 2051 ft.

UNION COUNTY—Arkansas Nat. Gas Co.'s Felsenthal 1, 11-17-14, hole junked at 2790 ft. Amerada Pet. Corpn's Ezell 1, 3-17-14, dk. Arkansas Drlg. Co.'s Carroll 1, 1-17-14, testing 3005 ft. Barton et al's Doss 1, 16-17-14, rig. O. W. Estes' Rowland 2, 14-17-14, set 10-in at 104 ft. Grimes Bro's Hill 2, 7-18-14, rig. H. L. Hunt's Dykes 1, 21-18-12, killing water flow 3203 ft; Gregory 2, 10-17-14, rig; Gregory 5, 15-17-14, rig; Gregory 9, 15-17-14, rig; Gregory 12, 10-17-14, rig. Hollyfield et al's McCain 1, 4-17-14, lcn. E. C. Johnson's Gregory 1, 10-17-14, coring 3180 ft; Gregory 2, 10-17-14, dk. Imperial O. & G. Co.'s Central Bank 1, 1-17-15, rig; Goodwin 1, 26-17-16, coring 3134 ft. E. M. Jones' Crain 4, 2-17-14, sd 3069 ft. W. R. Keever's Ezell A-6, 12-17-15, sd 2136 ft. Lion O. & R. Co.'s Murphy C-7, 8-16-15, wosr 2468 ft; Murphy H-3, 9-16-15, fsh 3351 ft; Rowland 4, 15-17-14, rig; Rowland 2, 15-17-14, dr 2505 ft; Kelly 1, 9-17-14, dr 200 ft; Nash 1, 6-17-13, blg 3058 ft. Lyall et al's Stegall 1, 11-17-13, arr to make drill stem test 2740 ft. Magnolia Pet. Co.'s Carroll 2, 1-17-14, sd 1500 ft; Carroll 3, 1-17-14, swabbing 2993 ft; Felsenthal 1, 11-17-14, dr 200 ft; Laney 3, 8-16-16, dk; Laney 4, 8-16-16, dk; Dumas 1, 11-17-14, dr 250 ft. Mellon Tr's VanHook 1, 7-18-14, wosr 2206 ft; Bullock 1, 7-18-14, wosr 2169 ft. Mountz et al's Pratt 6, 8-18-16, wosr 2200 ft. C. E. Murdock's Dumas 2, 11-17-14, rig; Dumas 3, 11-17-14, lcn; J. M. Gregory 3, 10-17-14, dr 3000 ft; J. M. Gregory 4, 10-17-14, dr 2500 ft; J. M. Gregory 5, 10-17-14, dr 240 ft; J. M. Gregory 6, 10-17-14, rig. J. O. Moore Tr's Pagan 1, 18-18-11, sd 2990 ft. Magna Prod. Co.'s Dumas 3, 11-17-14, set 4¾-in at 3284 ft; Dumas 5, 11-17-14, tested sw at 3293 ft; Dumas 6, 11-17-14, lcn; Rowland B-2, 14-17-14, dk; Rowland 2, 14-17-14, set 4¾-in at 3272 ft; Townsend 2, 10-17-14, dk; Townsend 4, 10-17-14, dk. Joe Marr's Sloan 1, 14-17-15, arr to deepen 2190 ft. Pat Marr's Hicks 1, 16-17-14, dk. Marr & Hooser's Slade 1, 3-17-14, dk. Mazda Oil Corpn's Diffie 1, 16-17-14, dk. Chas. F. Noble's Murphy Estate 1, 36-16-16, dk. Oil Well Corpn's Ezell 1, 3-17-14, lcn; Perdue A-1, 10-17-14, dk; Perdue A-3, 10-17-14, dk; Perdue B-1, 10-17-14, lcn; Perdue B-2, 10-17-14, lcn. Ohio Oil Co.'s Crain 4, 1-17-14, dk; J. M. Gregory 1, 10-17-14, lcn; Adams 1, 11-17-14, coring 3200 ft; Adams 2, 11-17-14, tested sw at 3275 ft; Adams 3, 11-17-14, dr 3017 ft; Adams 4, 11-17-14, coring 3298 ft; Lochner 1, 11-17-14, setting packer to test at 3289 ft; Lochner 2, 11-17-14, dr 2900 ft; Lochner 3, 11-17-14, dr 450 ft; Rowland 1, 15-17-14, fsh 3050 ft; Rowland 2, 15-17-14, lcn; Connor 1, 11-17-14, dr 300 ft; Smith 1, 1-17-14, sd 3094 ft. Ouachita Nat. Gas Co.'s Perdue 1, 33-16-14, tested sw at 32-2 ft. Patterson & Neighbor's Barnett 1, 33-17-14, set 10-in at 138 ft. Pure Oil Co.'s Gregory 4, 10-17-14, blg 3199 ft; Gregory 7, 10-17-14, dk; Gregory B-1, 10-17-14, coring 3316 ft; Gregory B-2, 10-17-14, dk; J. M. Gregory 2, 11-17-14, dr 3094 ft; J. M. Gregory 3, 11-17-14, dr 325 ft; J. M. Gregory 5, 11-17-14, lcn; Gregory Estate 2, 15-17-14, rig; Gregory Estate 3, 15-17-14, rig; Gregory Estate 4, 15-17-14, dk; Gregory Estate 5, 15-17-14, dk; Taylor 1, 10-17-14, rig; Taylor 2, 10-17-14, dk. Rhodes Tr's Amason 1, 21-16-14, dk; Union Saw Mill 1, 14-19-11, sd 3210 ft. Rice et al's Heineman & Meyers 1, 23-18-16, sd 2240 ft. Richardson et al's Goodwin 1, 16-16-14, set 10-in at 186 ft. Rovenger Oil Corpn's Perdue 2, 10-17-14, dk; Perdue 3, 10-17-14, lcn. Dr. Rushing et al's Gregory 3, 11-17-14, tested 25 lbs & spray sw at 3222 ft; Gregory 4, 11-17-14, dr plug 3170 ft; Gregory 5, 11-17-14, set 10-in at 167 ft. Root Ref. Co.'s Jerry 1, 21-17-14, dr 2621 ft; E. F. Gregory 1, 10-17-14, rig; J. M. Gregory 1, 15-17-14, rig; E. F. Gregory 2, 10-17-14, dk. Sun Co.'s Schmidt B-1, 16-17-14, rig. Simmons et al's Green 1, 3-16-16, dr 1880 ft. Skelly Oil Co.'s Perdue 3, 10-17-14, dk; Perdue 4, 10-17-14, dk. Timberlake et al's Dumas 1, 11-17-14, sd 3153 ft. Tharpe et al's Hicks 1, 16-17-14, lcn. F. B. Wood Tr's Spahr 3, 34-15-16, dk; Turnage 1, 34-15-16, tested show oil at 2054 ft.

LOUISIANA

CADDO PARISH—
Belchic & Lasky's Sharp 5, 10-18-16 . .....location abandoned
J. W. Burton Tr's Caldwell 8, 18-21-15 . .....derrick abandoned
Lochnager O. & G. Co.'s McMillan 2, 26-9-6e . .....location abandoned

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BIENVILLE PARISH—S. P. Borden's L. & A. 2, 1-15-8, set 8¼-in at 1786 ft. Humble's Anderson 1, 29-18-5, dr 4179 ft.

BOSSIER PARISH—Arkansas Nat. Gas Co.'s Bollinger 2, 38-23-11, rig; Peyton 1, 30-23-11, dr 1975 ft. Delaware-Louisiana Dev. Co.'s Bollinger 4, 38-23-11, dr 2965 ft. Doern et al's Bollinger 1, 9-22-11, sd 4317 ft. H. S. Goodwin Tr's Curtis 2, 36-17-12, sd 3257 ft; McDade 1, 36-17-13, dr 911 ft; McDade 2, 36-17-13, dk. Wm. Gross et al's Stewart 1, 15-18-12, sd 3074 ft. Hamiter et al's Hamiter 1, 10-23-13, sd 1875 ft. D. D. Johnson's Caddo Ind. 1, 13-17-14, sd 2640 ft. Natural Gas & Prod. Co.'s Kilgore 1, 31-23-11, r 3076 ft. R. O. Roy's Werner 1, 7-17-11, lcn; Caplis 1, 25-16-12, sd 800 ft. Walker et al's Antrim 1, 28-22-13, sd 2900 ft.

CADDO PARISH—Bayou State Oil Co.'s Jolly C-1, 27-22-15, tested sw at 2377 ft. W. T. Bell's Posey 4, 33-22-16, dk. J. T. Cox's Hall 1, 7-15-16, sd 1121 ft. W. W. Dodson's Rives 8, 5-20-16, lcn. Dixie's Robertshaw 81, 13-21-15, sd 4148 ft; Robertshaw 92, 13-21-15, dr 4447 ft; Dillon 53, 13-21-15, dr 3740 ft; Dillon 93, 14-21-15, dk; Huckaby 4, 11-21-15, sd 4037 ft. Dobson et al's Rives 7, 5-20-16, sd 1925 ft. Empire's Nicholson 1, 33-17-14, dr 4082 ft. Greenwood Prod. Co.'s Cushman & Bridges 1, 15-18-16, arr to deepen 912 ft. Wm. Gross et al's Baker 1, 35-17-16, sd 1148 ft. Gulf's Tyson 12, 14-21-15, dr 3585 ft; Tyson 13, 14-21-15, r 3800 ft. Magnolia's Bell 2, 6-17-16, sd 3225 ft; Dillon 21, 23-21-15, lcn; Robertshaw 22, 23-21-15, r 4335 ft; Bryson 2, 8-17-16, dr 1200 ft; Raines 26, 22-21-15, coring 3603 ft; Levee Board 3, 7-20-15, rig. D. C. Richardson's Youree 6, 30-20-15, sd 2305 ft. Simms Oil Co.'s Glassell 1, 23-20-15, sd 2366 ft. Simplex Oil Co.'s Baird 3, 22-20-15, sd 2265 ft; Hunsicker 6, 15-20-15, lcn. Shreveport Oil Corpn's Muslow 3, 32-21-15, dr 2460 ft. The Texas Co.'s C. M. L. 47, 23-21-15, dr 3825 ft. Warren & Carruther's Berry 1, 26-15-15, dk.

CATAHOULA PARISH—S. D. Hunter's Tensas 3, 4-9-8e, arr to deepen 2109 ft. Lochnager O. & G. Co.'s Taliaferro 1, 26-9-6e, lcn. Texas Co.'s Tensas Delta Lbr. Co. B-1, 4-10-6e, sd 195 ft.

DESOTO PARISH—Carlton Drlg. Co.'s Stevens 2, 12-11-16, sd 350 ft. Monrovia Co.'s Nabors 2, 5-12-11, set 10-in at 104 ft. R. O. Roy's Lee 1, 33-14-13, dk. Rudeseale et al's Nabors 1, 6-12-11, dk. Williams et al's Fortson 2, 4-12-11, set 6-in at 2340 ft.

EAST CARROLL PARISH—Palmer Corp.'s Hamley 1, 27-20-11e, rig. Texas Co.'s Boone Live Oak 1, 11-20-12e, sd 3013 ft. Woodley Pet. Co.'s GaGrden Home 1, 4-19-12e, rig.

FRANKLIN PARISH—Louisiana Pet. Co.'s Daily 1, 6-11-7e, sd 2200 ft. Pittsburgh Explo. Co.'s Moore 3, 12-11-6e, sd 2501 ft.

GRANT PARISH—W. D. Ball et al's Calhoun 1, 9-7-4w, sd 950 ft. Swope et al's Fee 3, 8-9-1e, sd 1607 ft; Fee 5, 8-9-1e, wosr 1602 ft; Fee 6, 17-9-1e, dk.

LA SALLE PARISH — Elbert Pet. Co.'s Urania 3, 7-10-2e, sd 700 ft. H. T. Taylor's Urania 7, 19-10-2e, sd 1574 ft. Tunica Pet. Co.'s L. & A. 42, 17-7-2e, set 6-inch at 803 ft.

MADISON PARISH—W. S. Smith's Yerger 1, 51-16-14e, sd 1690 ft.

MOREHOUSE PARISH—Consolidated Carbon Co.'s Fee 3, 9-20-4e, dk. Elbert Pet. Co.'s Morehouse Plbg. Co. 1, 40-19-7e, sd 2632 ft. Gulf's Higginbotham 1, 42-20-7e, tested sw at 2624 ft; Weymond A-1, 7-18-6e, changing rig 2000 ft. Natural Gas Prod. Co.'s Taylor 1, 12-21-4e, rig. Southern Carbon Co.'s Tensas Delta 4, 22-21-4e, lcn. Texas Co.'s Myers 1, 15-22-7e, set 4½-inch at 2896 ft; Huff 1, 36-23-7e, rig.

NATCHITOCHES PARISH — S. D. McDaniel's Clark-Morse 1, 23-5-6w, dr 1500 ft.

OUACHITA PARISH — Imperial O. & G. Co.'s Stubbs 6, 14-19-3e, dk. Jordan Drlg. Co.'s Slagle 1, 48-18-4e, dk. Montgomery et al's Johnson 2, 31-19-4e, dr 50 ft. Natural Gas & Fuel Corp.'s McEnery 1, 21-19-4e, rig. Ouachita Nat. Gas Co.'s Potts 1, 33-19-3e, dr 50 ft. Phillips et al's School Fee 1, 16-16-4e, dr 1064 ft. Pioneer O. & G. Co.'s Nolan 1, 17-18-4e, set 8-inch at 856 ft. Palmer Corp.'s Fee 4, 24-19-4e, lcn. United Consumers' Slaughter 1, 24-19-4e, lcn. J. O. White, Tr.'s, Schmidt 1, 3-15-4e, sd 3017 ft.

RAPIDES PARISH — C. E. Gilbertson's Wetymark 3, 13-5-4w, dk. Glenmore Pet. Co.'s Fee 1, 1-2-2w, sd 3860 ft.

RICHLAND PARISH — Boueff River Pet. Co.'s Sartor 1, 9-15-6e, rig. J. M. Fuller's Boise 1, 33-16-6e, lcn. W. C. Feazel's Pardue 1, 6-15-6e, lcn. Gulf's Millsaps 1, 8-17-6e, sd 3820 ft; Rhymes 3, 28-17-6e, sd 3645 ft. S. D. Hunter's Pardue 1, 21-16-6e, dk; McCoy B-1, 16-16-6e, set 6-inch at 2314 ft. Natural Gas & Fuel Corp.'s Sartor B-3, 19-16-6e, dk; Sartor B-4, 18-16-6e, lcn. Oliver & Master's Morrison 1, 2-15-5e, dr 2350 ft; Hatch Heirs 1, 11-15-5e, sd 2502 ft. Ruston Drlg. Co.'s Alexander 1, 4-15-5e, lcn; Etheredge 1, 28-17-6e, lcn. Southern Carbon Co.'s Sartor 3, 18-16-6e, dr 1885 ft; Sartor Jr. B-1, 9-16-6e, set 6-inch at 2280 ft.

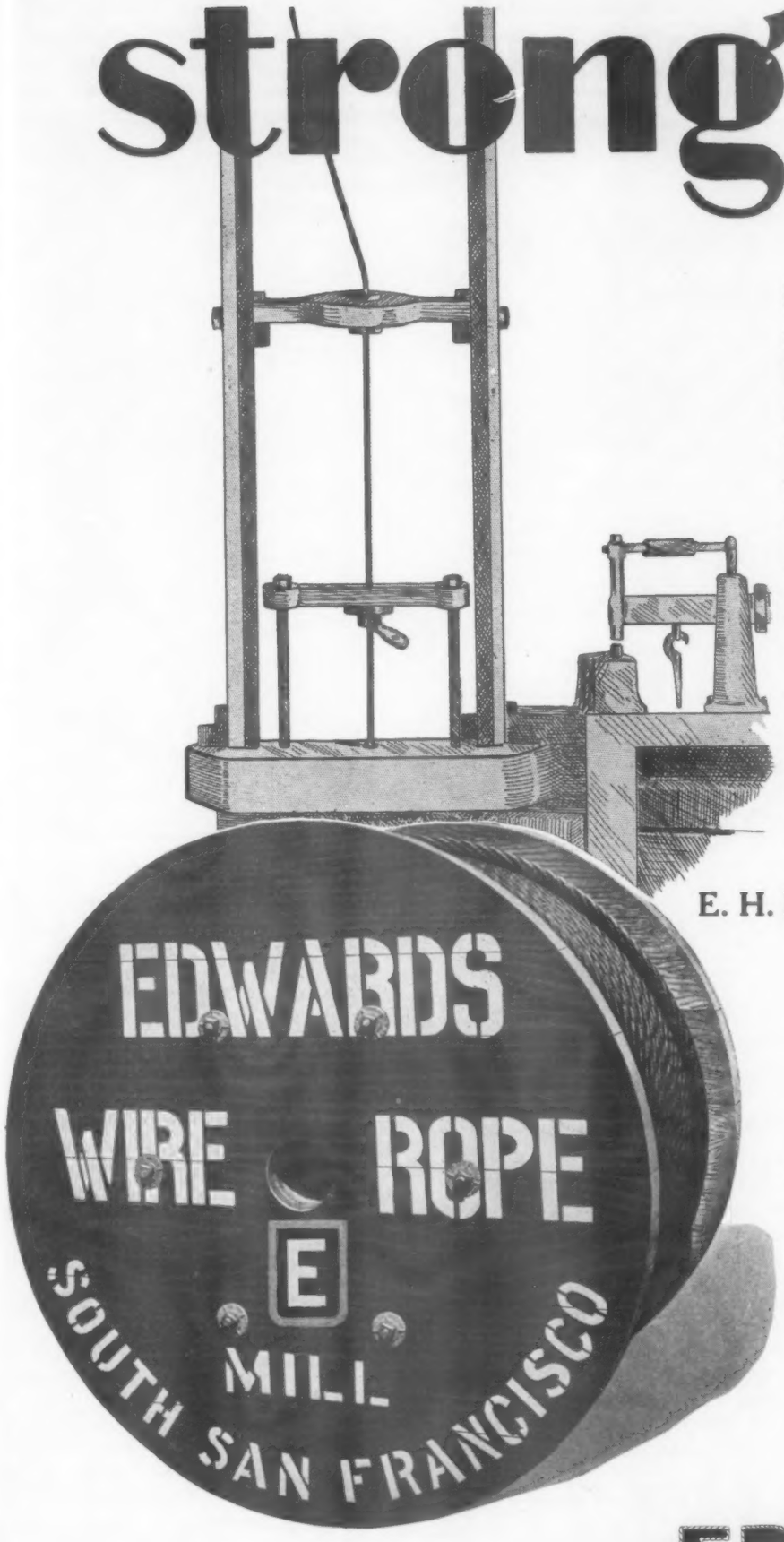
SABINE PARISH—Arkansas Fuel Oil Co.'s Logan 12, 33-10-12, dk. Doern et al's Pickering 1, 17-4-11, dr 2520 ft. R. L. Gay's Mansfield 1, 15-7-14, dr 2817 ft. Plymouth Oil Co.'s Logan A-2, 23-10-12, rig. Texas Co.'s Hamlin Estate 1, 28-10-13, dr 2950 ft. Zwolle O. & G. Co.'s Bowman Hicks 7, 14-7-14, sd 3966 ft; Sabine Lbr. Co. 1, 8-17-13, dk.

TENSAS PARISH—Enoch et al's Curry 1, 39-11-12e, rig.

UNION PARISH—Carter & Wingfield's Security Trust 1, 6-13-1e, rig. Jones & Mullin's McLeod 1, 13-19-1e, lcn. Moody & Seagrave's Norsworthy 1, 9-21-3e, dr 900 ft. Natural Gas Prod. Co.'s L. J. Pace 1, 35-22-3e, set 8-inch at 905 ft; N. A. Pace 1, 35-22-3e, dk. Ruston Drlg. Co.'s Betty Neal 1, 24-20-3e, sd 50 ft. R. W. Rhodes' Upshaw 1, 14-23-2w, dk. United Carbon Co.'s Peck 1, 7-20-4e, dk.

WEBSTER PARISH—Allison et al's Lewis 1, 15-21-10, set 6⅝-inch at 4520 ft. Bethany O. & G. Co.'s Adkins 1, 32-23-9, dr 700 ft. Dixie Oil Co.'s Cox 1, 15-21-10, dr 4078 ft. Virgil Helm's Mitchell 1, 32-23-9, set 10-inch at 300 ft. J. P. Hawkins Well Synd.'s Lewis 1, 15-23-9, dr 2655 ft. Humble's Webb 2, 14-21-10, sdtr 4700 ft; Bodcaw A-2, 14-21-10, dr 3650 ft; Davis 6, 14-21-10, set 6⅝-inch at 4200 ft; Cox 4, 22-21-10, dr 3545 ft. S. A. Lane's Miles 1, 24-17-9, sd 1469 ft. Louisiana Oil Ref. Corp.'s Lindsay 4, 22-21-10, blg 4684 ft; Crichton 5, 21-21-10, sd 4670 ft. C. H. Lyon's Porter-Wadley 2, 29-23-9, testing 2732 ft. Morris et al's Lewis 1, 15-23-9, sd 150 ft. Magnolia's Bailey-Munn 1, 30-23-9, dk; Turner 5, 21-21-10, dk; Coyle 2, 21-21-10, dr 3500 ft; Cook 1, 2-22-11, dk; Mixon 1, 22-21-10, dr 4594 ft; Wise 1, 30-23-9, tested No. 3 at 2649 ft; Aarnes Cox 3, 22-21-10, dr 3960 ft; D. G. Cox 1, 22-21-10,

strong



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drill stem stuck 4670 ft; E. W. Cox 5, 15-21-10, dr 3237 ft; Merritt 5, 14-21-10, dr 1636 ft. Ohio Oil Co.'s Bodcaw 39, 15-21-10, set 6⅝-inch at 4303 ft; Bodcaw 40, 15-21-10, set 6¼-inch at 4316 ft; Bodcaw 41, 15-21-10, set 6¼-inch at 4303 ft; Haynes 1, 30-23-9, dr 1603 ft; Hodges 2, 23-21-10, dk; Holloway 5, 23-21-10, rig. Palmer Corp.'s Mixon 1, 22-21-10, setting liner to test 4679 ft. Bruce Richardson's Mayfield 1, 20-23-9, wosr 2776 ft; Bailey 1, 29-23-9, rig. Woodley Pet. Co.'s Duhe 2, 22-21-10, dk; Burrow 1, 21-21-10, lost hole at 462 ft, skidding over.

WINN PARISH—Calvin Oil Co.'s L. & A. 1, 9-11-4w, sd 60 ft.

TEXAS GULF COAST

AUSTIN COUNTY—Humble's Bracey 1, Raccoon Bend, ru; Grawunder A-1, Raccoon Bend, dr 4323 ft sandy shale; L. R. Urban 1, Raccoon Bend, ru; H. Grawunder 1, Raccoon Bend, lcn. L. H. Weadock's Ward 1, sd 2025 ft.

BRAZORIA COUNTY—Roxana's Randon 1, Allen dome, coring 5140 ft; Poole A-2, Allen dome, dr 356 ft. Gulf's Perry 4, Stratton Ridge, dr 2740 ft gbo. Leonard Pet. Co.'s Widom 3, Damon Mound, preparing to pump. McNellie Oil Co.'s Bartlett 1, West Columbia, dr 3510 ft sand.

CHAMBERS COUNTY—R. L. Bartlett's Fisher 1, Barbers Hill, sd 2160 ft. Pure Oil Co.'s Lost River 1, Lost Lake dome, sd 3838 ft; Old River 1, Lost Lake dome, dr 890 ft; Little Lost Lake 1, Lost Lake dome, dr 1970 ft; Trinity River 1, Lost Lake dome, dk; Lost River 1, Lost Lake dome, dk; Cut-Off Bayou, Lost Lake dome, dk.

COLORADO COUNTY—Rich Oil Corp.'s Von Rosenberg 1, 2½ mi ne Columbus, sd 2700 ft. Johnson Bros.' Beckett 1, e of Sheridan, dr 2065 ft shale.

FORT BEND COUNTY—Sun Oil Co.'s E. C. Farmer 2, Boling, dr 2665 ft lime; Kaspareck 3, Boling, dr 3545 ft; H. R. Farmer 6, Boling, dk. Gulf's Trone 8, Long Point, dr 2870 ft; Wolf 9, Long Point, dr 800 ft; Moore 16, Moore's field, dr 1400 ft. Humble's Brazos Farm 1, Sugarland dome, dr 3328 ft; Sugarland Industries 2, Sugarland dome, dr 2836 ft shale; The Texas Co.'s E. Farmer 1, Boling, lcn. Deathridge 1, Sugarland dome, dr 1068 ft gbo and boulders. J. H. Diehl's Armstrong 1, 2 mi e Boling, dr 365 ft shale.

HARDIN COUNTY—The Texas Co.'s Cruse 1, Batson, dr 426 ft rock.

HARRIS COUNTY—Torsen et al's Stewart 1, 4 mi sw Genoa, dk. J. A. Hautier's Grouse 1, Greens Bayou, dr 1675 ft gbo. Hunt et al's Lobit 1, 4 mi n Goose Creek, fsh 2148 ft. Humble's Warren 4, Hockley, dr 2650 ft sand and shale. Cedar Bayou Oil Co.'s Johnston 1, 8 mi n Goose Creek, dr 1100 ft gbo. The Texas Co.'s House 21, n extension Humble field, dr 2925 ft shale and lime. Drummitt et al's Brock 1, Almeda, lcn.

JEFFERSON COUNTY — Deep Test Oil Co.'s McFaddin 1, 4 mi ne Spindle Top, 2175 sd 2175 ft. Gulf's Bordages 6, Fannett, dr 2900 ft. So. Spindle Top O. & Dev. Co.'s Young 1, 1 mi w Nederland, sd 3425 ft. Port Arthur O. & Dev. Co.'s West 4, Westbury, dr 4415 ft. A. M. Deems et al's Mashman 2, s Voth, lcn. The Texas Co.'s Gladys City 1, Spindle Top, dr 4682 ft lime and shale. Beaumont Oil Co.'s Tyrrell 1, 2 mi w Brooks, dk. Oswald Dome Syndicate's Oswald 1, 2 mi se Chelk, dr 50 ft.

LIBERTY COUNTY—Barlow et al's Minchcliff 1, 2½ mi ne Cleveland, sd 2215 ft. The Texas Co.'s Green 4, nw extension S. Liberty, dr 2894 ft cap rock; Pickett 2, S. Liberty, dr 2013 ft gbo and lime. Big Dome Interests' Finley 1, 2½ mi nw Hardin, dr 2935 ft shale. Harrison Oil Co.'s Quintette 3, N. Dayton, dr 3548 ft gbo. Humble's Sterling 1, Moss Bluff, dr 1682 ft hard sand and lime; Welder 8, S. Dayton, set 10-inch cas at 620 ft. Sun Oil Co.'s Kyle 1, Moss Bluff, dr 1150 ft water sand.

MATAGORDA COUNTY—Matagorda County Dev. Co.'s Hawkins 1, Bay City, sd 1985 ft. Gulf's Vinyard 1, Hawkinsville, coring sand 3875 ft. Dr. Griffith et al's Robbins 1, e Citrus Grove, lcn; Baer 1, 1½ mi n Gulf Hill, dr 375 ft shale.

WALLER COUNTY—Jno. Young et al's Young 1, 10 mi s Hempstead, dr 1920 ft sand.

SOUTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
CAMERON PARISH—		
Noble et al, Ellender 1, Hackberry...	*	4490

ASCENSION PARISH—Gulf's United Lands Co. 8, Sorrento dome, sd because of high water. Acme Prod. Co.'s De Haas-Eby 1, Sorrento, dk. Triumph Oil Corp.'s Lacey et al 1, 1½ mi se Sorrento, sd on account of high water.

CALCASIEU PARISH—Union Sulphur Co.'s Fee 726, Sulphur dome, dr 3230 ft sand; Fee 728, Sulphur dome, ru; Fee 729, Sulphur dome, lcn; Fee 730, Sulphur dome, ru. Lehay et al's Jones 2, lcn.

CAMERON PARISH—Pure Oil Co.'s Sweet Lake 2, Sweet Lake, waiting on Sweet Lake 3, Sweet Lake, dr 6074 ft; Sweet Lake 4, Sweet Lake, flowing 100 bbls net oil; Sweet Lake 5, Sweet Lake, Flowing 3400 bbls net oil daily. La. Land & Explo. Co.'s Calcasieu Lake B-2, ¼ mi ne Kelso Bayou dome, coring at 2400 ft; Calcasieu Lake A-2, Kelso Bayou district, bldg dk. Calcasieu Oil Co., Magnolia Pet. Co. and Union Sulphur Co.'s Doiron 2, Kelso Bayou dome, dr 4660 ft; Caldwell 3, Kelso Bayou dome, dr 3600 ft; Watkin s4, Kelso Bayou dome, set cas at 3848 ft; Watkins 6, Kelso Bayou dome, dr 1070 ft; Watkins 7, Kelso Bayou dome, lcn; Watkins 8, Kelso Bayou, lcn; Valery 1, Kelso Bayou dome, dr 2800 ft; Olevia 2, Kelso Bayou, dr 1700 ft. Noble et al's Ellander 1, Hackberry, abn at 4490 ft. Roxana's Watkins 2, Black Bayou district, ru. Yount-Lee Oil Co.'s State Land 12, Kelso Bayou, bldg dk; State Land 13, Kelso Bayou, dr 1700 ft gbo; State Land 14, Kelso Bayou, lcn; State Land 15, Kelso Bayou dome, lcn; State Land 16, Kelso Bayou dome, lcn; State Land 17, Kelso Bayou dome, lcn.

IBERIA PARISH—La. Land & Explo. Co.'s Vermilion Bay A-2, dr 2320 ft rock. Gulf's State Z-5, Loreauville, sd 100 ft; Kling et al 1, Loreauville, dr 250 ft.

IBERVILLE PARISH—Union Sulphur Co.'s Schwing 2, Bayou des Glaise dome, sd 3175 ft. Roxana's Wilbert 2, White Castle dome, dr 956 ft sandy lime. Welch Pet. Co.'s Purveiance 1, Welsh, coring sand 3038 ft.

JEFFERSON DAVIS PARISH—Indiana-La. Oil Co.'s LeDoux 1, sdtr 625 ft.

LA FOURCHE PARISH—Gulf's Stak 4, Thibodaux, dr 867 ft.

ST. MARTIN PARISH—Rycade's Fee 2, Bayou Bouillion dome, 800 bbls production, pumping and flowing; Fee 3, Bayou Bouillion, dr 3645 ft; Fee 4, Bayou Bouillion dome, dr 1175 ft; Fee 5, Bayou Bouillion, dk. State 1, set surface cas; Martin 1, ru. Yount-Lee Oil Co.'s Louisiana Pet. Co. 1, Anse le Butte, gas blowout at 1975 ft. A. G. Broussard's Bergeron 1, Anse la Butte, sd 1360 ft. Bowie O. & G. Co.'s Begnaud 4, Anse le Butte, sd 3910 ft.

WEST FELICIANA PARISH—Foster & Roberson's Raccourci 1, dk.

WEST BATON ROUGE PARISH—Grosse Tete O. & G. Co.'s Wilbert 1, ru.

SOUTHWEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
JIM HOGG COUNTY—		
Houston Gulf Gas Co., Palacious 15 sec 297	30	1252

CALDWELL COUNTY—Joe Bruner et al's Wilson 1, bailing and swabbing 20 bbls from 2570 ft. Radcliff et al's Briscoe 1, 3 mi ne Luling, sd at 2550 ft. United North & South Dev. Co.'s Tiller 2, Luling, dr 7410 ft schist; Kelly 1, Luling, dr 7730 ft schist. Datex Oil Co.'s August 1, Branyon district, running 6⅝-in. Magnolia's Gerry 1, Branyon dist, flowing sulphur water from 2500 ft. Davis et al's Young 1, Branyon district, shot at 1975 ft, bailed 5 bbls, now sd. Roxana's July 1, W. Lockhart, pumping water and some oil from 1325 ft.

DUVAL COUNTY—National Oil Co.'s Bell 1, sd 2185 ft. R. Driscoll's Fee 12, dr 2360 ft.

HIDALGO COUNTY—Dale Smith's Daskan 1, sd 3235 ft. Queen City O. & G. Co.'s American Land & Irrigation Co. 2, 3 mi n Mercedes, sd 700 ft.

JIM HOGG COUNTY—T. G. Shaw's Jones 1, Hebbronville, dr.

JIM WELLS COUNTY—Cushing Oil Co.'s Perez 1, 3 mi n Alice sd 1550 ft.

KINNEY COUNTY—Stephens et al's Clamp 1, dr 1350 ft.

MAVERICK COUNTY—Rycade Oil Corp.'s Chittam 1, Eagle Pass, td 5630 ft; Chittam 2, Eagle Pass, dr 5880 ft. Ryan Colsolidated's India Land Co. 1, 24 mi se Eagle Pass, fsh 4400 ft.

NUECES COUNTY—May et al's Gallagher 1, 12 mi w Corpus Christi, dr 150 ft gbo.

SAN PATRICIO COUNTY—National Oil Co.'s McMullen Sur. 1, sd 290 ft.

STARR COUNTY—The Texas Co.'s Guerra 1, near Roma, dr 3734 ft shale.

VAL VERDE COUNTY — Sast Del Rio's Weatherbee 1, sd 3335 ft. Thraves et al's Wilson 1, dr 1125 ft. Valvert Oil Co.'s Bassett 1, ru.

NORTHERN CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
PIRU—		
Trinitas Oil Co., Eureka 1, 29-4-18	*	....

KERN COUNTY

ARVIN—Texas Co.'s Pauley 1, 22-32-29, sp.

BAKERSFIELD—Pacific Eastern Prod. Co.'s 3, 6-30-28, 10-inch cas cmt 3835 ft, td 3920 ft; Nos. 1 and 2 on same section are sd. Jackson and Chamberlain's 1, 19-29-18, sd 525 ft.

BELRIDGE—Zuric Oil Co.'s 1, 18-28-22, fsh 2790 ft.

BUTTONWILLOW — Milham Explo. Co.'s H-1, 8-28-23, new lcn. Doheny-Stone Drill Corp.'s S-1, 7-29-24, sd 4280 ft. Southern California Gas Co.'s 1, 4-28-23, dr shale 4132 ft.

COMANCHE POINT—W. W. Stabler's Tejon 1, 10-inch casing frozen 1115 ft, td 2630 ft.

DELANO—E. C. Johnson's 1, 33-25-27, dr gray sand 1494 ft.

EDISON—General Pet. Corp.'s Kerwin 1A, 5-30-29, dr sand 6006 ft. Midway Northern Oil Co.'s Brown 1, 29-29-30, dr gray sand 3475 ft.

GREENFIELD—J. E. O'Donnell's Houghton 1, 31-30-28, sd 4060 ft.

GOULD HILLS—Cymric Oil Co.'s Porter 2, 36-28-20, plugged to 565 ft, running liner. Exeter Oil Co.'s Parry 1, plugged to 875 ft, setting liner.

McFARLAND—General Pet. Corp.'s Stiles 1, 35-25-25, dr shale 4526 ft.

McKITTRICK—Ozena Oil Co.'s 1, 27-29-21, dr blue shale 2175 ft.

SHAFTER—North American Royalties Co.'s 1, 8-28-25, sp.

WASCO — Main Oil Co.'s 2, 28-27-24, co 5270 ft.

WILLOW SPRINGS—Cy. Wickers' 1, 7-9-15, dr shale 418 ft.

SANTA BARBARA COUNTY

ELWOOD—Barnsdall Oil Co.'s Bell 1, 35-4-29, new lcn.

SANTA BARBARA—Channell O. & Dev. Co.'s 1, 29-4-27, 4¼-inch cas re-cmt. 5490 ft, td 6-25 ft. Tepusquet Oil Co.'s 1, 30-9-32, dr shale2 366 ft.

SUMMERLAND — Summerland Oil Co.'s Becker 1, sd 3045 ft.

VENTURA COUNTY

BARDSDALE—Triple A. Investment Co.'s Elkins 1, 5-3-19, sdtr dr pipe 2274 ft.

CAMARILLO—American Oil Co.'s 1, 33-2-20, dr hard rock 2k2 ft.

FILLMORE—Henry Demound's 1, 19-4-19, heating asphaltum to pump, td 300 ft.

OJAI — Continental's Fox 1M, sr 555 ft; Thompson 1, 22-4-22, dr shale 616 ft. California-Ventura Oil Co.'s 4A, dr shale 1125 ft.

OXNARD—Shell's GGrub 1, 22-2-22, coring 2926 ft; Lambert 1, 22-2-22, sd 1650 ft.

PIRU—Petroleum Securities Co.'s Diablo 1, 26-5-10, dr brown shale 4865 ft, slight oil showings.

RINCON—Scott Pet. Co.'s Rincon 1, 35-4-25, dr shale 4861 ft.

SANTA PAULA—W. W. Bryant's Anlauf 2, 21-4-21, dr shale 725 ft.

SAN PEDRO—Point Fermin's Kerrman 1, 13-4-21, sr 560 ft, td 600 ft.

SATICOY—Standard Oil Co.'s Vanoni 1, 11-2-22, dr shale 1466 ft.

SIMI—Shell's Berylwood 1, 32-3-20, co 7240 ft; Strathern 1, 6-2-189, bridge at 2200 ft, td 5290 ft, sd.

SOUTH MOUNTAIN — Ring Pet. Corp.'s Converse 1, dr shale, slight oil showings 4240 ft.

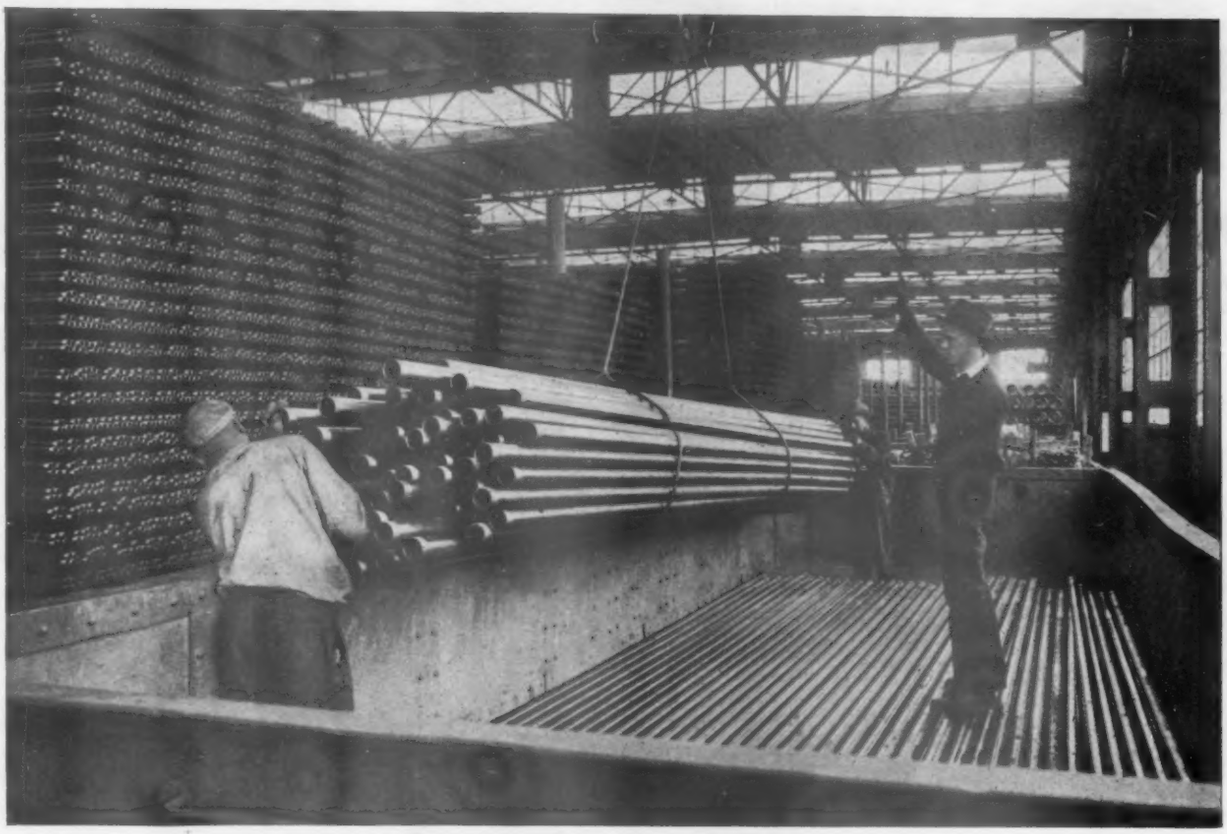
VENTURA—Star Pet. Co.'s Canet 1A, 13-3-23, 8⅝-inch casing cmt 5947 ft.

MISCELLANEOUS

FRESNO COUNTY — Fresno-Madera Oil Co.'s 1, 18-21-21, dr gray sand 4141 ft.

KINGS COUNTY — Milham Exploration

Steel Pipe, ordered *today* . . .



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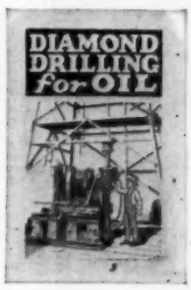

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2. **UNEQUALLED Tightness. The MALONEY patented crimp—an exclusive feature that causes exact fit of parts,—our special rubber packing and Gaso Cement,—produce a bolted steel tank that is *absolutely* tight.**

Howell Aluminum "3-in-1" Vacuum Pressure Valve and Thief-Hatch —The BEST and LATEST Deck Equipment—POSITIVE Safety.

THE MALONEY TANK MFG. CO.

Tulsa, Okla., U. S. A.

Distributors at All Principal Petroleum Points

Sizes: 12 to 10,000 Barrels

Packed in Steel-Bound Crates for Export

MADE OF KEYSTONE COPPER STEEL

MADE OF KEYSTONE COPPER STEEL

MALONEY

Co.'s Elliott 1, 2-22-17, re-dr 6360 ft, td 7236 ft.

MONTEREY COUNTY—Marland Oil Co.'s 1, 32-24-11, dr shale 3318 ft.

MADERA COUNTY—Los Angeles-Madera Synd.'s 1A, 21-10-17, sp.

SAN LUIS OBISPO COUNTY — Indian Dome Oil Co.'s 1, 25-31-12, dr shale 2730 ft. North Star Oil Co.'s 1, 5-32-13, co 865 ft, td 3250 ft. San Luis Synd.'s 1, 29-31-13, dr shale 3026 ft. Texas Pacific Oil Co.'s 1, 25-23-14, fsh for bit, td 2785 ft. Union's Russ 1, 34-32-15, dr oil sand 3812 ft; Chandler 1, 12-32-14, new lcn.

SAN MATEO COUNTY—Shell's Butts 1, 21-6-5, dr hard sand 2731 ft; Cowell 1, 8-6-5, dr sand 1975 ft.

SONOMA COUNTY—Shell's Mossi 1, 8-5-7, prod 1 million cu ft gas 2140 ft.

TULARE COUNTY—Ducor Drilling Co.'s 1, 29-23-27, dr up junk, td 4160 ft. Kings-Tulare Synd.'s 1, 19-21-23, dr shale 4263 ft.

SOUTHERN CALIFORNIA

BELLFLOWER—World Pet. Corp.'s Bellflower 1, new rig.

CLAREMONT—Claremont O. & G. Co.'s 1, sd 1130 ft.

CALABASAS—Eastman & Smith's Morrison 1, dr shale 2015 ft.

COSTA MESA—Mesa Pet. Corp.'s B. G. 1, dr shale 3025 ft.

DAVIDSON CITY — Calif. Well Drilling Co.'s 1, sd 7555 ft.

DOMINGUEZ — Dominguez Extension Oil Co.'s 1, 22-3-13, sd 5510 ft.

EL SEGUNDO — Southern Calif. Drilling Co.'s 1, re-dr 3462 ft, td 4865 ft.

FULLERTON—Shell's Stern 1, dr sand 5245 ft .

HAWTHORNE — San Clemente Oil Co.'s Peck 1, co, depth not reported.

HUNTINGTON BEACH — Calnan Pet. Corp.'s S. W. 1, sd 5107 ft.

INGLEWOOD—Ring Pet. Corp.'s Simma 1, dr pipe frozen 4350 ft.

LANCASTER—J. B. Harding's 1, 28-7-11, sd 975 ft.

LYNWOOD—Security Pet. Corp.'s 1, 13-3-13, co 5025 ft.

MONTEREY PARK — Monterey Park Pet. Corp.'s 1, re-dr to 3802 ft.

PUENTE HILLS—Anchor Pet. Co.'s Hudson 1, dr brown shale 3244 ft.

SAN FERNANDO—Shell's Mission 2, dr sand 2540 ft.

SAN JOSE HILLS—D. and B. Oil Co.'s 1, plugged to 3000 ft.

SAN JUAN CAPISTRANO—O. K. Carr,'s Forster 1, sd 4185 ft.

WESTMINISTER—McCollom and Taylor's Price 1, dr shale 4915 ft.

MISCELLANEOUS

RIVERSIDE COUNTY—Spindletop O. & G. Synd.'s 1, dr brown shale 3360 ft, small gas showings. Trabuco Oil Co.'s 1, sd 3555 ft.

SAN BERNARDINO COUNTY—Hesperia Oil and Gas Co.'s 1A, plugged to 2000 ft. J. W. McPhearson's Clide 1, sd 410 ft. Western Pacific Oil Co.'s 3, co 3050 ft, td 3065 ft.

SAN DIEGO COUNTY—Davenport O. & G. Co.'s 1, sdtr bit 550 ft. Torrey Pines Oil Co.'s McGregor 1, dr on junk 1390 ft. S. S. Turner's Baler 1, dr shale 890 ft.

OKLAHOMA

WOODS COUNTY— T 28, R 18w, Sec. 11, George Vincent et al's Freedom 1, c sw; Pond.

GRANT COUNTY—T 28, R 3w, Sec. 6. Otstot et al's Snyder 1, ne c, sd 4518 ft.

HARPER COUNTY—T 27, R 21w, Sec. 24, A. F. Kopich Oil Co.'s Selman 1, ne c se, spd and sd.

WOODS COUNT—T 27, R 15w, Sec 20, Sooner State Oil Co. & E. R. Black's Marcum 1, c sw, spd and sd.

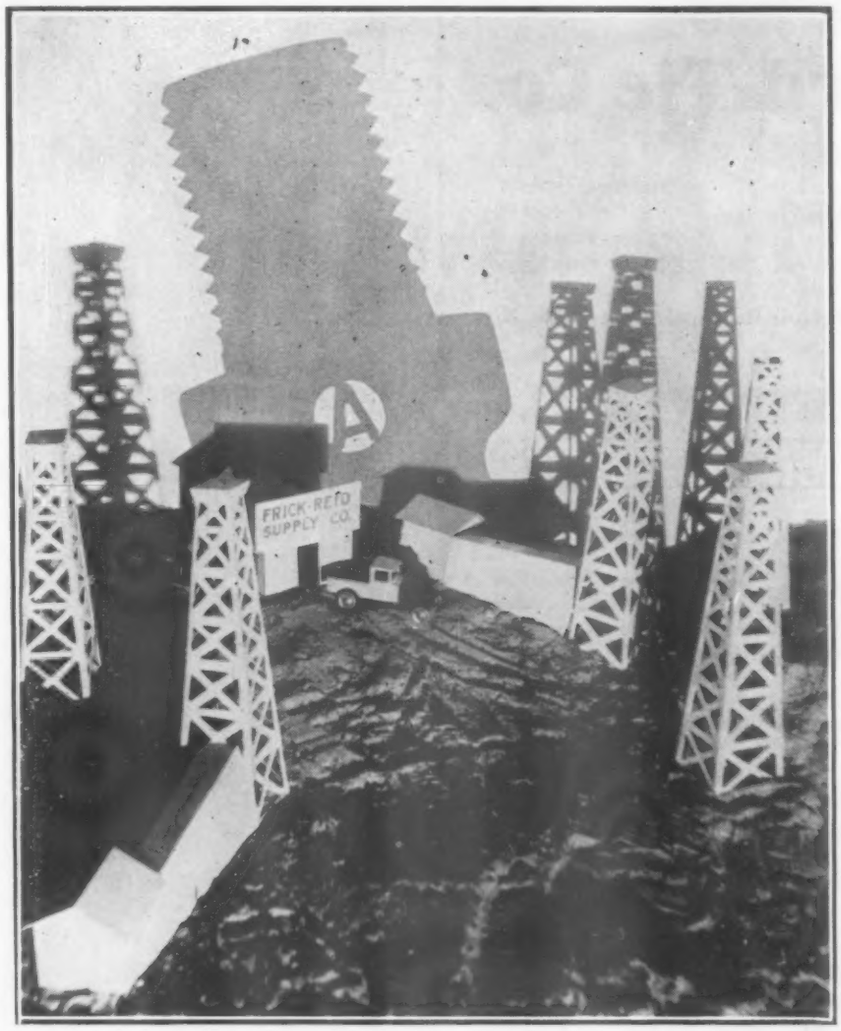
GRANT COUNTY—T 27, R 5w, Sec 18. J. Bailey's Custard 1, c se, ts 4835-47 ft, 800,000 gas, td 4882 ft, bad cave. T 26, R 4w, Sec 34. Sooner State Oil Co.'s Royce 1, swc nw, sd 550 ft.

KAY COUNTY—T 26, R 2e, Sec 32, J. A. Vincent & Nat'l Union Oil Co.'s McNeal 1, nwc ne, sd 2795 ft.

HARPER COUNTY—T 25, R 22w, Sec 14, Hoffer Oil Co.'s Cooper 1, nwc se, sd 4182 ft.

GRANT COUNTY—T 25, R 4w, Sec 22. Cowden's Vallner 2, ne se ne sw, lost tools 5640 ft td, sd.

KAY COUNTY—T 25, R 1w, Sec 15, Tom-



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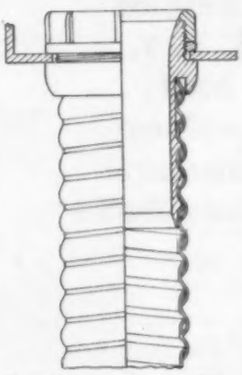

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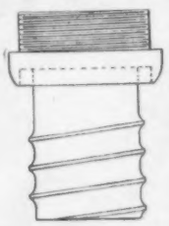

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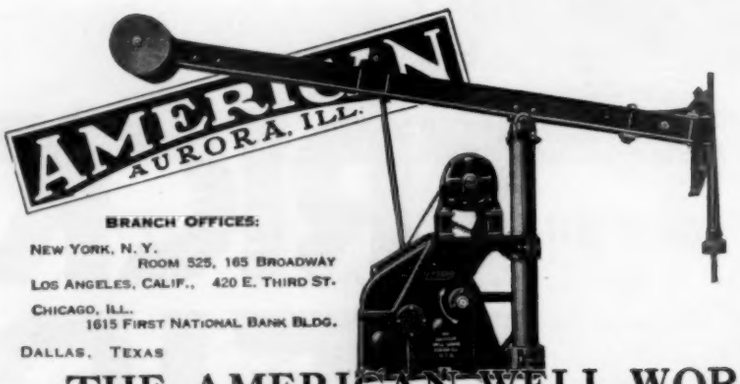

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655 Rooms and every Bedroom with Private Bath
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kawa Dev. Co.'s McDaniels 1, sec, bit in hole 4638 ft.

NOBLE COUNTY— T 24, R 3e, Sec 11, Geo. Miller et al's Howe 1, c nw se, dr 400 ft. T 21, R 1w, Sec 7, R. L. Corley's Williams 1, sec ne sw, sd 1920 ft. T 20, R 1w, Sec 32, Marland Oil Co.'s Kidd 1, nwc sw, dr 5100 ft.

CIMARRON COUNTY — Sec 27, Ramsey Bros.' State Land 1, c nw ne, 4090-4140 ft show 35 bbls; shot 30 quarts. 4670-4680 ft hfw, p. b. to 4140, pulling pipe to abandon.

TEXAS COUNTY—T 1n, R 18e, Sec 11, Three Way Oil Co., Price 1, sec nw, 3318-58 ft hfw, sd 3490 ft.

WOODWARD COUNTY—T 24n, R 17w, Sec 32, Otstot Dev. Co.'s Simmons 1, sec, sd 1500 ft.

GARFIELD COUNTY—T 24n, R 6w, Sec 9, Pulse & Beamer's White 1, sec nw, sd 4720 ft. T 24n, R 3w, Garfield, Sec 14, Sagar Oil Co.'s Garsarch 1, sec, drlg by csg 4767 ft.

ELLIS COUNTY—T 21n, R 25w, Sec 9, Oklahoma Northern Oil Co.'s 1, c se nw, sd 300 ft.

WOODWARD COUNTY—T 21n, R 19w, Sec 15, Burgoyne Bros. 1, swc se ne, sd 800 ft. T 21n, R 21w, Sec 25, Sharon Elmore 1, swc, sd 2778 ft.

GARFIELD COUNTY—T 20n, R 4w, Sec 9, Marland Oil Co.'s Looman 1, nec se, sd 5735 ft. Sec 12, Marland Oil Co.'s Miller 1, swc, sd 4586 ft.

DEWEY COUNTY—T 18n, R 15w, Sec 9, Huckelby & McCoy Perfect 1, nec, drlg 4160 ft.

LOGAN COUNTY—T 18n, R 3w, Sec 33, Haley & Consolidated Drlg. Co.'s Quier 1, sec sw, fish 5 joints 5-in 3945 ft, bad hole 3923 ft, show gas. T 17, R 1e, Sec 28, T. B. Slick's Berry 1, swc se, td 5730 ft, hfw pb to 4700 ft.

KINGFISHER COUNTY—T 16n, R 7w, Sec 6, Galt Brown Oil Co.'s Campbell 1, c nw se, sd 4516 ft. T 16n, R 6w, Sec 27, Crawford & McKenna's Stugeon 1, nec sw, sd 4509 ft.

LOGAN COUNTY—T 16n, R 1w, Sec 28, Blackford O. & G. Co.'s Lair 1, csl n½ se, sd 1675 ft. T 15n, R 1w, Sec 12, Bu-Vi-Bar's Kirkpatrick 1, c sw, drlg 5460 ft, show wtr.

CANADIAN COUNTY—T 14n, R 6w, Sec 9, A. D. Spears' Piatt 1, sec ne, sd 3223 ft.

OKLAHOMA COUNTY—T 13n, R 3w, Sec 18, Slick & Bailey's Lufkin 1, c ne se, 4260 ft td, ur 6-in 4238 ft. T 12n, R 3w, Sec 15, Cromwell et al's Thompson 1, swc ne ne, td 6870 ft, 1000 ft tubing and cement in hole.

CANADIAN COUNTY—T 11n, R 7w, Sec 9, Ramsey Bros.' Newman 1, csl ne, drlg 5500 ft. T 10n, R 6w, Sec 1, J. M. V. Bailey's Robinson 1, c ne nw, spudded and sd.

OSAGE COUNTY—T 26n, R 7e, Sec 30, Peters & Producers & Refiners' 1, sec ne, drlg 1500 ft. T 23n, R 10e, Sec 7, Sheeders O. & G. Co.'s 1, c ne, Wilcox 2527-54 ft, td 2640 ft, show oil & hfw sd.

PAWNEE COUNTY—T 22n, R 5e, Sec 33, Washoma O. & G. Co.'s Buffalo 1, sec nw, drlg 580 ft.

CREEK COUNTY—T 19n, R 8e, Sec 34, Wood & Wood's McIntosh 1, swc se sw, drlg 2880 ft.

PAWNEE COUNTY—T 18n, R 3e, Sec 32, Garber, Pulse & Gloyd's Widows 1, nec se nw, sd 1200 ft.

LINCOLN COUNTY—T 17n, R 3e, Sec 20, Willis O. & G. Co.'s Gun 1, nwc se, ts 4636-77, run 5 ft co. T 13n, R 4e, Sec 16, Bu-Vi-Bar's School Land 1, c ne se, sd 4500 ft.

CREEK COUNTY—T 14n, R 9e, Sec 1, L. C. Wheeler & King's Morton 1, sec nw, location.

OKFUSKEE COUNTY—T 11n, R 10e, Sec 4, Moose & Daniels' Stidham 1, swc nw, sd 622 ft.

MUSKOGEE COUNTY—T 13n, R 17e, Sec 34, Elk Drlg. Co.'s McKee 1, csl se se se, sd 160 ft. T 13n, R 18e, Sec 33, L. T. Haynie's Linder 1, c se, sd 2003 ft.

PITTSBURG COUNTY—T 9n, R 16e, Sec 32, Pattison et al's McDuff 1, swc nw se, 3 M gas at 1613-35 ft, drlg 5295 ft.

HASKELL COUNTY—T 9n, R 18e, Sec 10, Marion Oil Co.'s Sanders 1, nwc ne sw, 2 M gas at 1800 ft, sd 2310 ft.

LATIMER COUNTY—T 5n, R 18e, Sec 15,

Where Rodwear *and* Corrosion make short work of Ordinary Tubing

BYERS '28
the Spiral Stripe
protects you against mistakes and substitution
Also look for name and year rolled in metal
BYERS

① *Cheaper Metal*

② *Poor Wrought Iron*

Galvanized Tubing

Byers Galvanized tubing has shown itself so vastly superior to other galvanized tubing in nearly every field where excessive corrosion is experienced, that it is being rapidly adopted by all those who have watched and compared its service with that of other kinds of tubing.

Rods Nos. 1 and 2 were in service in the same location—two bottom joints—in the same well, for the same length of time. Rod No. 1 was of ordinary metal, Rod No. 2 of a poor quality wrought iron, probably "busheled" from a mixture of steel and wrought iron scrap. While both were severely attacked by corrosion, Rod No. 1 suffered nearly twice as heavy a loss as No. 2. The tubing, of ordinary quality, had to be renewed at frequent intervals.

If accounts were kept of the cost of using rods and tubing not made of genuine wrought iron, there would be a heavy deficit on the side of lower priced tubing and pump rods. Byers tubing costs a little more at first, being made of genuine wrought iron, but in the end pays out handsomely.

Byers tubing not only resists corrosion but rod-wear. The frictional heat generated by the rods is very much smaller where wrought iron tubing is used, and crystallization and wear are correspondingly reduced.

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GENUINE WROUGHT IRON

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Announcement

THE INDEPENDENT TORPEDO COMPANY and THE EASTERN TORPEDO of OHIO COMPANY have been merged into—

THE INDEPENDENT-EASTERN TORPEDO COMPANY

The new company, combining the personnel and the facilities of its two predecessors, is able to offer unsurpassed service in well shooting in the oil fields of Ohio, Michigan, Indiana, Illinois, Kentucky, Kansas, Oklahoma, Texas, Wyoming and Montana.

The loyal patronage of the customers of the two old companies through many years is respectfully solicited for the new and greater—

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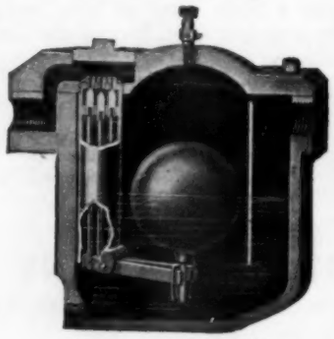
WRIGHT-AUSTIN
"Emergency"
High Pressure 3-valve Steam Trap



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Limestone O. & G. Co.'s Murray 1, swc, sd 1700 ft.

CLEVELAND COUNTY—T 10n, R 2w, Sec 22, Cromwell & Franklin's Donavan 1, c sw, 4706 ft d&a.

POTTAWATOMIE COUNTY—T 10n, R 3e, Sec 12, Sikes, Kilgore & Shaffer's Ives 1, swedgeing 5-in csg.

SEMINOLE COUNTY—T 10n, R 6e, Sec 3, Superior Oil Co.'s Davis 1, swc se, d 2125 ft. T 10n, R 7e, Sec 6, Blackwell O. & G. Co.'s Bean 1, sec ne sw, cemt cave 4157 ft; Sec 18, Shaffer et al's Jones 1, swc ne, set 8-in 4010 ft.

POTTAWATOMIE COUNTY—T 8n, R 2e, Sec 24, Superior's Jones 1, swc nw ne, drlg 4435 ft. T 8n, R 4e, Sec 1, Amerada's Gravel 1, swc se ne, td 4485 ft hfw, pb to 4429 ft, shot 40 qts at 4340-80 ft, swab 40 bbls.

HUGHES COUNTY—T 8n, R 10e, Sec 1, Bauer et al's Penn 1, nwc sw ne, rig.

CLEVELAND COUNTY—T 7n, R 1w, Sec 15, Sooner Oil's Vandeveer 1, nec nw sw, set 6-in 2998 ft.

POTTAWATOMIE COUNTY—T 7n, R 2e, Sec 17, T. B. Slick's Spangler 1, nw se nw nw, drlg 3885 ft.

SEMINOLE COUNTY—T 7n, R 6e, Sec 7, Simon & Beam's Palmer 1, nec nw ne, rig.

POTTAWATOMIE COUNTY—T 6n, R 5e, Sec 16, T. B. Slick's School Land 1, sec, drlg 4397 ft, hf sulphur wtr; Sec 20, Roxana's Deister 1, nwc se ne, drlg 3050 ft.

SEMINOLE COUNTY—T 6n, R 6e, Sec 1, T. B. Slick's Moore 1, swc ne sw, sd 2870-75 hfw, pb to 2760-75 ft, pump 7 bbls oil, 200 wtr.

HUGHES COUNTY—T 5n, R 9e, Sec 17, E. W. Whitney's Huddleston 1, sec sw, spudding; Sec 20, C. F. Noble et al's Wickett 1, sec, d&a 3015 ft.

GARVIN COUNTY—T 4n, R 3e, Sec 10, Garland Oil Co.'s Strickland 1, swc nw sw, drlg 2729 ft hfw.

PONTOTOC COUNTY—T 4n, R 6e, Sec 13, American O. & R. Co.'s Wright 1, nwc ne ne, hl 2872-3115 ft, dry, td 3215, sd.

HUGHES COUNTY—T 4n, R 9e, Sec 14, Clarke & Cowden's Burrow 1, c nw ne, drlg 3803 ft.

PONTOTOC COUNTY—T 3n, R 8e, Sec 10, Douglas Oil Co.'s Johnson 1, c nw nw, drlg 1585 ft.

COAL COUNTY—T 2n, R 8e, Sec 5, Wichtex Oil Co.'s Folsom 1, c nw nw, location.

MURRAY COUNTY—T 1n, R 2e, Sec 17, Revels & McGee's Wolfe 1, nwc, drlg 822 ft.

COAL COUNTY—T 1n, R 8e, Sec 35, W. E. McGraw et al's Patton 1, swc se ne, show oil 1838-1912 ft, shot 105 qts drlg 1955 ft. T 1n, R 9e, Sec 24, Galbreath et al's Jones 1, swc se, spudded and sd.

CUSTER COUNTY—T 14n, R 14w, Sec 1, W. E. Witt's 1, c sw, location.

CADDO COUNTY—T 12n, R 11w, Sec 15, Abernathy & Ashton's 1, c nw, location. T 10n, R 12w, Sec 28, Magnolia's Shelby 1, swc, drlg 3170 ft.

BECKHAM COUNTY—T 9n, R 22w, Sec 32, O. & H. Pet. Co.'s Barnes 1, nwc ne, owdd, sd 3170 ft.

KIOWA COUNTY—T 7n, R 15w, Sec 35, David Malernee's Van Kirkland 1, nwc, drlg 858 ft. T 6n, R 15w, Sec 6, Johnson & McDowell's 1, c sw ne, sd 1215 ft.

CADDO COUNTY—T 6n, R 12w, Sec 29, W. J. Hartley's Gilbreath 1, sec nw se, owdd, sd 3394 ft.

KIOWA COUNTY—T 5n, R 14w, Sec 17, Blue Mtn. Oil Co.'s Jones 1, sec nw nw, sd 625 ft.

GRADY COUNTY—T 4n, R 7w, Sec 21, Commercial Dev. Co.'s Crisman 1, c ne ne, drlg 2510 ft.

STEPHENS COUNTY—T 2n, R 5w, Sec 20, Martin & Smythe's Vestal 1, c ne se, rur.

COMANCHE COUNTY—T 1n, R 12w, Sec 14, P. Hrbacke & A. E. Korthaus' Wilson 1, c ne sw, owdd, small show oil at 3315 ft, sd 3430 ft.

JACKSON COUNTY—T 1s, R 20w, Sec 33, Stanley McGregor's 1, swc nw sw, location.

TILLMAN COUNTY—T 2s, R 17w, Sec 23, A. J. Bundy's Hayter 1, cnl s½ se, sd 400 ft.

KIOWA COUNTY—T 2s, R 16w, Sec 6, Landfair's 1, sec sw se, sd 2464 ft.

COTTON COUNTY—T 4s, R 12w, Sec 16, Guiler & Pyson's Thomas 1, sec sw, rig.

JEFFERSON COUNTY—T 5s, R 8w, Sec 28, Amerada's Emerson 1, nwc se sw, drlg 2020 ft.

JOHNSTON COUNTY—T 1s, R 7e, Sec 29, Smity-Kinsley's Lane 1, sec nw, sd 50 ft. T 4s, R 4e, Sec 18, Wirt Franklin Pet. Corp.'s Wilkes 1, swc se, drlg 120 ft.

MARSHALL COUNTY—T 4s, R 4e, Sec 35, Wirt Franklin Pet. Corp.'s Foster 1, sec sw sw nw, drlg 758 ft.

JEFFERSON COUNTY—T 5s, R 4w, Sec 8, M. M. Mitcham et al's Newcomb 1, swc se se, drlg 1930 ft.

MARSHALL COUNTY—T 5s, R 4e, Sec 11, Bilbo's Chapman 1, nec nw ne, sd 380 ft.

KANSAS

BARBER COUNTY—T 30, R 14w, Sec. 27, Rowland et al's Pickens 1, owd, nec nw ne, dr 3750 ft. T 31, R 12w, Sec. 17, Merriman et al's Winters 1, c e½, dr 3800 ft. T 33, R 12w, Sec. 19, Schaffer et al's Boggs 1, c sw, dr 5865 ft. T 33, R 13w, Sec. 2, Schaeffer et al's Carter 1, c se se, fsh 3980 ft. T 34, R 13w, Sec. 20, Barton Oil Co.'s Blunk 1, c ne nw, 3570 ft, rep. rig.

BARTON COUNTY—T 17, R 11w, Sec. 34, McJolton et al's Evanson 1, sec nw, r.o.g. T. 20, R 13w, Sec. 12, Everette & Wiley's Ward 1, nwc sw, sd 3940 ft.

BUTLER COUNTY—T 24, R 3e, Sec. 22, Flemming et al's Brainard 1, nec nw, lcn. T 24, R 8e, Sec. 5, Mathews et al's Harsh 1, nec sw, sd 2630 ft. T 25, R 4e, Sec. 18, Wichita Drilling Co.'s Joseph 1, nec se nw, fsh 2760 ft. T 27, R 3e, Sec. 24, La Rob Oil Co.'s Baysinger 1, nec sw, rig.

CHASE COUNTY—T 21, R 7e, Sec. 9, Greener, Fowler et al's Carson 1, nec, sd 2505 ft.

CHATAUQUA COUNTY—T 32, R 8e, Sec. 15, Roth & Farrot's Hamil 1, nwc sw nw, lcn.

CLARK COUNTY—T 32, R 21w, Sec. 21, Watchorn O. & G. Co.'s Stephens 3, cel w½ nw nw, dr 4120 ft.

CLOUD COUNTY—T 6, R 4w, Sec. 6,

Treat CUT OIL with TRET-O-LITE

the SIMPLEST MOST ECONOMICAL MOST RAPID METHOD

Just mix in Tret-O-Lite, and oil and water promptly separate. Let us send our nearest field expert to see you.

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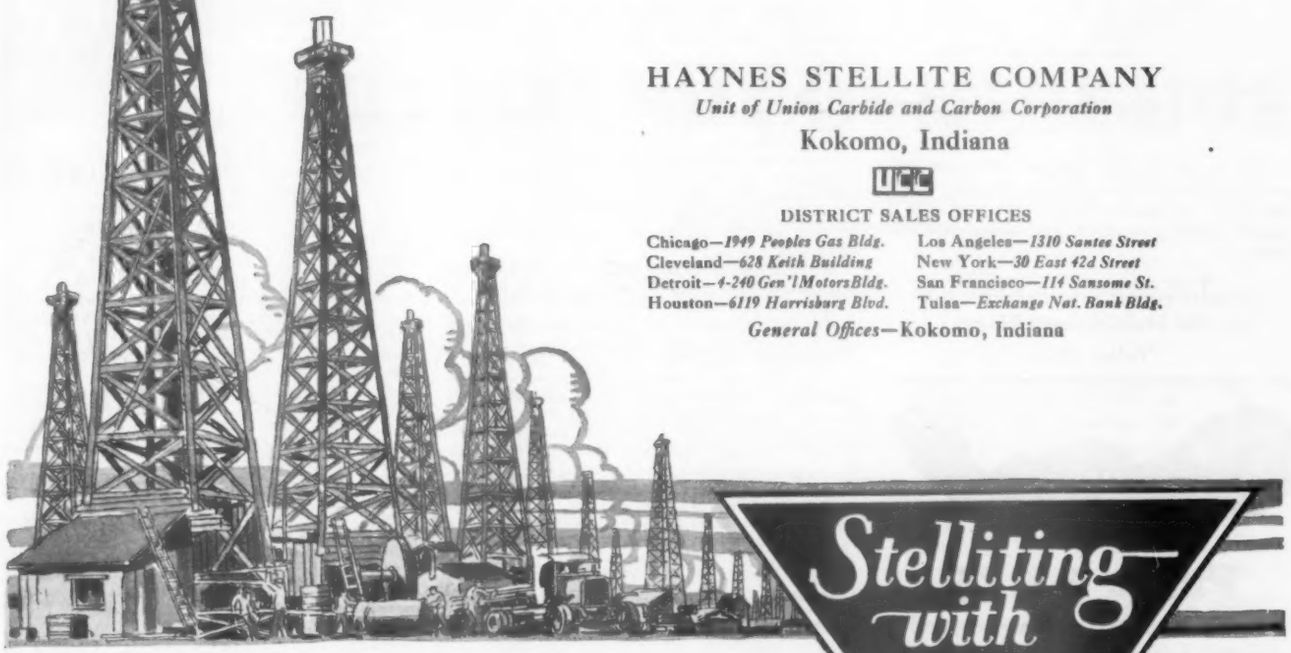
HAYNES STELLITE

Costs more per pound

but

less per foot of hole



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Shaffer Boiler Gauge Cocks have been on the market for six years.

Today over 50,000 are in use in practically every oil field throughout the world.

When Manufacturers of oil field boilers such as:

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Farrar & Trefts, Inc.
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Kewanee Boiler Co.
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Broderick Boiler Co.
Donovan Boiler Works

use them as standard equipment on all their new boilers in preference to all others . . . *THEY MUST BE GOOD.*

A set of Shaffer gauges will cost less and last you longer. Your Supply Store has them in stock. Try a set and you'll wonder how you ever got along without them.

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Price $2.25

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the Standard Boiler
Gauge Cock

Concordia Oil Co.'s Murdock 1, sec, sd 3590 ft.

COFFEY COUNTY—T 22, R 15e, Sec. 11, Clark et al's Douglas 1, nwc se ne, sd 1235 ft

COWLEY COUNTY—T 30, R 3e, Sec. 3, Vickers Pet. Co.'s Daniels 1, nwc ne, dr 2910 ft. T 30, R 4e, Sec. 6, Roxana & Vernon's Gilmer 1, sec nw ne, rig. T 30, R 6e, Sec. 20, Allison & Fitzwilliams Manley 1, nec nw se, sd 1685 ft. Sec. 36, Herron et al's Marshall 1, owdd, swc ne, t. s. 2914-33 ft, 2000 ft o. i. h. T 32, R 3e, Sec. 14, Roth & Faurot's Ehmke 1, nec nw, dr 1690 ft. T 32, R 6e, Sec. 18, Lewis Gas Prod. Co.'s Cook 1, nec sw, d&a 3150 ft. Sec. 31, Roth & Faurot's Werner 1, nec sw, lcn. T 33, R 4e, Sec. 4, White Oil Co.'s White 1 swc ne, d&a 3150 ft. T 34, R 3e, Sec. 10, Shawver et al's Amen 1, nwc, dr 3418 ft. Sec. 35, Lewis & Hollis' Newman 1, swc se, d&a 2044 ft. T 34, R 5e, Sec. 26, White Eagle's Smith 1, sec ne se, dr 300 ft.

DICKINSON COUNTY—T 15, R 4e, Sec. 23, Kansas Oil Corp. & La Rob's Weber 1, nwc se, rig. T 16, R 4e, Skow & Ritchey's Will 1, c nw nw, lcn. Sec. 18, Gilliland Oil Co.'s Schlessner 1, c sw ne, dr 2284 ft.

ELK COUNTY—T 28, R 13e, Sec. 22, Price et al's Thompson 1, cel se sw, sd 350 ft.

ELLIS COUNTY—T 11, R 17w, Sec. 2, Streeter & Stearns' Slimer 1, nwc se, lcn. T 12, R 17w, Sec. 5, Haworth & Howard's Shutts 1, c ne, lcn. Sec. 25, Derby Oil Co.'s Weigle 1, c nw, dr 3350 ft. T 13, R 19w, Sec. 21, Thomas & Moncrief's Boettcher 1, c sw, rig.

FRANKLIN COUNTY—T 16, R 18e, Sec. 17, Smith, Thrice & Fisher's Owens 1, cel e½ e½, sd 1450 ft. T 17, R 17e, Sec. 25, Omar O. & G. Co.'s Bush 1, sec sw, lcn.

GEARY COUNTY—T 12, R 7e, Sec. 10, Pioneer Pet. Co.'s Chase 1, sec, dr 2730 ft.

GREENWOOD COUNTY—T 25, R 12e, Sec. 30, Smith & Downard's Dickerson 1, sec ne ne, dr 1500 ft. T 26, R 11e, Sec. 28, Paul & Parker's Wiley 1, swc se nw, spud and sd. T 27, R 12e, Sec. 6, Obins et al's Cooper 1, nwc sw, dr 700 ft. T 27, R 13e, Sec. 10, Bringar et al's Lawrence 1, nwc, machine. Sec. 15, Mid Kansas et al's Adams 1, nec sw, sd 150 ft.

GRAHAM COUNTY—T 8, R 25w, Sec. 27, Gulf Coast Drlg. Co.'s St. John 1, owdd, swc nw se, dr 3490 ft.

HARPER COUNTY—T 34, R 6w, Sec. 24, Amerada Pet. Corp.'s Mendevelle 1, c se se, dr 5071 ft.

HARVEY COUNTY—T 23, R 2w, Sec. 11, Roxana's Houry 1, nec sw se, dr 2073 ft.

JACKSON COUNTY—T 8, R 14e, Sec. 3, Smith et al's Wabunce 1, nec nw, sd 2530 ft.

JEFFERSON COUNTY—T 9, R 19e, Sec. 13, Northern Counties' Edwards 1, sec nw nw, sd 2405 ft. T 10, R 17e, Sec. 19, Wichita Oil Co.'s Simpson 1, nwc sw sw, rig.

LABETTE COUNTY—T 33, R 17e, Sec. 1, Cowell et al's Hornbeck 1, swc ne sw, sd 1375 ft.

McPHERSON COUNTY—T 17, R 1w, Sec. 18, Galt Brown et al's Fross 1, c ne, dr 1560 ft. T 20, R 3w, Sec. 20, Polar Oil Co.'s Grey 1, c nw, dr 1700 ft. T 21, R 3w, Sec. 9, Herron et al's Vershell 1, nec, spud and sd.

MARION COUNTY—T 17, R 3e, Sec. 13, Rosenthal et al's Talchman 1, nwc sw sw, spud and sd. T 18, R 4e, Sec. 21, Skow et al's Fronta 1, swc ne, lcn abn. T 19, R 3e, Sec. 7, Davis et al's Rample 1, swc nw, gas 596-610 ft. T 20, R 4e, Sec. 26, Tidal Oil Co.'s GrGaham 1, c sw ne, spudding.

MEADE COUNTY—T 33, R 28w, Sec. 9, Blackwell O. & G. Co.'s Lilly 1, c se, dr 2980 ft.

MITCHELL COUNTY—T 9, R 7e, Sec. 32, Gurley et al's Abercrombie 1, c nw ne, dr 930 ft.

MORRIS COUNTY—T 14, R 5e, Sec. 29, A. A. Oil Co.'s Adams 1, nwc ne se, dr 1800 ft. T 14, R 7e, Sec. 32, Klein et al's Barber 1, sec nw, rig.

NEMEHA COUNTY—T 3, R 11e, Sec. 19, Nemeha O. & G. Co.'s Myers 1, nwc, sd 3050 ft.

OSBORNE COUNTY—T 9, R 15w, Sec. 30, Davis et al's Pruter 1, sec sw, d&a 3703 ft.

OSAGE COUNTY—T 15, R 15e, Sec. 3, Barber et al's Lease 1, c se se, sd 260 ft. T 15, R 16e, Sec. 27, West et al's Baley 1, swc ne, sd 600 ft. T 17, R 17e, Sec. 8, Mull Vit Dev. Co.'s Neil 1, nwc sw ne, sd 2930 ft.

POTTAWATOMIE COUNTY—T 9, R 8e, Sec. 7, Shaw et al's Washington 1, sec lot 7, rig. T 10, R 12e, Sec. 11, Crawford et al's St. Mary 1, swc, sd 2290 ft.

RENO COUNTY—T 22, R 4w, Sec. 6, Danciger et al's Williams 1, nec sw se, rig. T 26, R 4w, Sec. 5, Empire & Marland's Williams 1, sec ne, fsh 2350 ft.

RILEY COUNTY—T 10, R 7e, Sec. 20, Welton Oil Co.'s Thierer 1, nwc, sd 3028 ft.

ROOKS COUNTY—T 8, R 16w, Sec. 14, Krueger et al's Poor 1, nec, spud and sd. T 8, R 18w, Sec. 15, Empire O. & R. Co.'s Dodrill 1, nec se nw, spudding. T 10, R 19w, Sec. 23, Findiess et al's Catudal 1, nwc se se, dr 1245 ft.

RUSH COUNTY—T 17, R 17w, Sec. 27, Valerious O. & G. Co.'s Schreverman 1, c nw dr 1300 ft.

RUSSELL COUNTY—T 13, R 12w, Sec. 35, Hartman & Skaer's Taylor 1, c sw, rig. T 14, R 11w, Sec. 25, Douglas Oil Co.'s Stobble 1, c e½, dr 2800 ft.

SALINE COUNTY—T 16, R 3w, Sec. 29, Kano Pet. Co.'s Helm 1, c ne, lcn. T 16, R 5w, Sec. 6, Estey et al's Peterson 1, c ne, spud.

SEDGEWICK COUNTY—T 26, R 1w, Sec. 12, Gypsy, Marland et al's Wright 1, sec ne se, dr 2365 ft.

SEWARD COUNTY—T 33, R 33w, Sec. 14, Ash et al's Son 1, owdd, nec, dr 4010 ft.

SHERMAN COUNTY—T 7, R 40w, Sec. 20, Hanson et al's Murray 1, owdd, nec sw nw, dr 2990 ft.

SUMNER COUNTY—T 33, R 3w, Sec. 22, Otstot et al's Bartlow 1, sec, sd 1800 ft. T 34, R 2e, Sec. 1, Endfield & Foster's Houston 1, c ne sw, dr 2575 ft. T 34, R 2w, Sec. 23, Gypsy Oil Co.'s Douglas 1, nec se nw, ts 4493-4505 ft, made 300 bbls. T 34, R 3w, Sec. 1, Jarvis et al's Wernecke 1, sec sw, dr 4685 ft. T 34, R 4w, Sec. 11, Jarvis et al's Wycoff 1, swc nw, sand 4755 -78 ft, hfw. T 35, R 1e, Sec. 9, Otstot et al's Volker 1, nwc ne, rig.

TREGO COUNTY—T 13, R 21w, Sec. 20, Central Commercial Oil Co.'s Ellins-King 1, nec sw ne, sd 315 ft.

WABUNSEE COUNTY—T 11, R 10e, Sec. 24, Doric Oil Co.'s JoJnes 1, nec sw, sd 1530 ft. T 13, R 12e, Sec. 15, Eskridge Oil Co.'s Henderson 1, nec sw ne, sd 3700 ft.

MOUNTAIN STATES

WYOMING

ALBANY—Union of Calif., 1, sw nw 35-17n-75w, co 2221 ft.

BIG HORN—Utah Southern Oil Co., 3, 29-56n-97w, fsh 3399 ft. Producers & Refiners 3, 24-56n-98, run 10-inch at 2206 ft. Assurance Oil Co. 1, 25-51n-93w, rig. Prescott-Bert 3, 30-51n-92w, spudded.

CARBON—Graybeal Dome Syn., 16-28n-80w, resuming at 4500 ft.

CONVERSE—Wind River O. & G. Co., ne 8-32-72, resume 600 ft. Criterion Oil Co. Irvine 1, 5-31-70, dr on pipe at 3180 ft.

FREMONT—Producers & Refiners, Muskrat 1, 34-34-92, dr 3880 ft. Texas Production Co., Alkali Butte 1, 1-34-95, dr 3465 ft. Iowa-Wyoming Inv. Co., 30-1s-2e, bottomed 1500 ft. Martin Falk, ne 9-31n-98w, fsh 2280 ft. R. A. Brett et al, Haywire 1, se 29-32n-98w, dr 2110 ft. Solar Pete Co., 2, se 29-32n-98w, td 1800 ft.

JOHNSON—Fairway Oil Co., Crazy Woman 1, 7-47-82, sd 2367 ft. Tarrant Synd., 17-46n-82w, sd 3615 ft.

LINCOLN—Fontenelle Oil Co., ne ne 1-24n-113w, td 1075 ft, sd. Quad States Enterprise, Inc., 11-19n-116w, spud. Midwest Explo. Co., Waterfall 1, sw 35-22-115, dr 150 ft. Viking Oil Co., 33-25-112, spud.

NATRONA—M. C. Weisman et al, se 4-30-81, dr 1000 ft.

NIOBRARA—Buck Creek Oil Co., 4-36n-62w, cem off water at 1600 ft, dr ahead.

PARK—Fred G. Ostland, Hoodoo ranch 1, 23-51-101, td 1740 ft. E. H. Rosenburg, ne 25-58n-98w, dr below 1590 ft. California Exploration Co. & Producers & Refiners Pitchfork 1, 14-48n-102w, dr 125 ft. Ohio Oil Co., 27-53-101, run 8¼-inch to 3685 ft. Lenco Pete Co., 20-53-101, sd 150 ft. Julius Peters et al, 17-57-101, lcn. Ydoc Oil Co., 6-15n-101w, sd 745 ft. Union of Calif., Taylor 1, 22-47-101, dr 3742 ft. T. N. Clark et al, se 11-49n-102w, resume at 692 ft.

PLATTE—Walter Adams, Trustee, 13-25-66, oil and gas showing at 2250 ft.

SUBLETTE—Wyo. Producers, sec 30-28n-113w, dr 1905 ft. California Co., 11-29n-115w, dr 850 ft. Lackey et al, 12-28n-114w, redr 500 ft. Minton et al, 4-26n-113w, sd 1445 ft.

SWEETWATER—Prairie O. & G. Co., Tucker 1, 18-13-99, pull 15½-inch at 710 ft. Pro-

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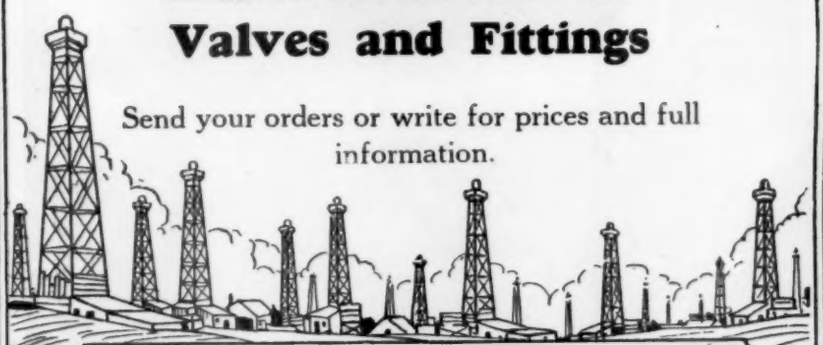

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ducers & Refiners Corp. & Marland of Colorado, 26-20-104, run 12½-inch at 2040 ft. Tower Pete Co., 1, 6-14n-103w, standardizing, td 271 ft. Custer Pet. Co., 24-12-100, 50,000,000 cu f at 2240 ft. Vermilion Oil Co., sw 16-12-99 rig up.

UINTA—Uita O. & D. Co., 21-51n-120w, casing trouble at 2300 ft. Evanston O. & G. Co., 17-15-120, resum, td 2200 ft. California Co., 7-17n-116w, dr 700 ft. Minton et al, 8-18-116, dr 450 ft. P. L. Cooper et al, 10-16-118, will resume. Brigman et al, 12-15-118, dr 1504 ft. Whitman et al, 18-16-117, dr 900 ft. Deseret O. & R. Co., 8-14n-118w, dr up bailer at 2266 ft.

MONTANA

BIG HORN—Selig Oil Co., se 21-6s-35, rigging to resume, td 850 ft.

CARBON—Ohio Oil Co., Northern Pacific 1, 11-7s-21e, fsh bit at 4410 ft. Atlantic Oil Co., 3, 20-7s-24e, dr 7470 ft.

CASCADE—Lone Star, McLean 1, se 13-21-3e, td 310 ft. Winter et al, Roth 1, sw 11-22-1e, rig.

CHOTEAU — Wissilston-Shelby Oil Co., Flack 1, se 12-28-11e, spudded in.

FERGUS—Melton Corp., Fenholt 1, 24-21-17, set cas on bottom at 2400 ft and dr ahead. Mineral Research Co., 1, 13-17-23, sd 930 ft. DeMont Oil Co., 29-16-29, completing. Minnesota-Flatwillow Pet. Co., 5-12-25, moving in.

GARFIELD—Carroll Bros., nw ne 6-14n-31e, standing cem at 1440 ft.

HILL—Gad Hamilton, se 15-30-13e, dr 600 ft. Jones Oil Co., Mangell 2, 32-32-14, dr 267 ft. MacFarland et al, sw 15-30-13e, dr 600 ft.

LIBERTY—Sunburst O. & R. Co., Disotell 1, 10-37-5e, td 3015 ft. Square Deal Oil Co., Federal Land Bank 1, se 1-32-73, dr 900 ft.

RICHLAND—Community Dr. Co., Pioneer 1, se 35-27-51n, dr 3182 ft.

PONDERA—Calif. Pet. Corp., Jones 1, nw 8-27-4w, dr 1260 ft. Calpet, Copley 1, ne 14-27-4w, rig. Continental Dev. Co., Gjullin 2, nw 15-27-4w, rig up. Calpet, Kingsbury 1, sw 15-27-4w, rig up.

PHILLIPS—Big Dome Oil Co., Bloomberg 1, ne 1-32-32e, resuming 980 ft. Dillman & Stephenson, 8-31n-34e, dr below 750 ft.

SWEETGRASS—Shoshone Consolidated, ne 23-2n-15w, last report td 2950 ft.

TETON—Fulton Pet. Corp., Trevillion 1, ne 21-27-4w, sd 1916 ft. Elkhorn O. & G. Co., 1, ne 12-24-1e, sd 400 ft. Genou Oil Co., Speer 4, ne 4-25-1e, rig up. Mitchner et al, Willick 1, nw 18-24-1e, dr 300 ft. C. L. Archer et al, 1, se 31-26-1e, rig up. Hardrock Oil Co., Speer 2, sw 5-25-1e, rig up.

TOOLE—Madeline Oil Co., Swenson 1, ne 33-35-4w, dr 2050 ft. West. Nat. Gas Co., Pitchard 1, 3-37-2e, dr 2600 ft.

UTAH

BOX ELDER—Utah Pennsylvania Oil Co., nw 3-10n-4w, spudded May 8.

CARBON—Price River Pet. Co., 1, se 16-14s-10e, dr 2700 ft.

GRAND—Utah Oil Refining, Moab Consolidated, Utah Southern, Salt Valley 1, 13-23-21, spd 100 ft. Utah Southern and Moab Consolidated, Shafer 1, 36-26-20, resume at 1415 ft. Navajo Pet. Co., 2-20-21, dr 250 ft. Crystal Carbon Co., 7, 14-20-21, dr in at 2000 ft. Crystal Carbon Co., 8, 26-20-21, dr 1000 ft. Crescent Eagle Oil Co., 1, se 4-22s-19e, co to 2600 ft, td 4000 ft. Western States Dev. Co. 1, sw 27-21s-19e, sd 1375 ft, will resume.

MILLARD—Beaver Valley Oil Co., Blackrock 1, 20-25s-9w, dr 3200 ft, carrying 4½-inch.

NAVAJO RESERVATION—Continental Oil Co., Boundary Butte 1, 31-43-21, dr by lost tools at 4041 ft.

SAN JUAN—Union Oil Co. of California, 40 miles southeast of Moab, spotting location. Boulder Knoll O. & G. Co., 1, 17-34-25, dr 2425 ft.

UINTAH—Western Venture Oil Co., Krumvieda 1, 6-5-21, underr to lower cas to 923 ft. Maude Ellen Oil Co., 28-3-21, dr 1080 ft.

UTAH—Diamond Oil Co., 3, ne 28-8s-4e, cem 10-inch at 1350 ft.

WAYNE—Texas Prod. Co., Shipley 1, 5-27-14, fsh 2975 ft. Phillips Pet. Corp., 16-27-16, dr 1410 ft.

WASHINGTON—Ora L. Hiatt et al, ne 30-43-14w, dr 479 ft. Mid-American Oil Co., ne 17-43-15w, dr 1550 ft. Virgin Pet. Corp., 2, ne 23-41s-12w, td 1593 ft. Zion O. & R. Corp., 3, sw 13-41s-12d, sd 756 ft. Ora L. Hiatt, or

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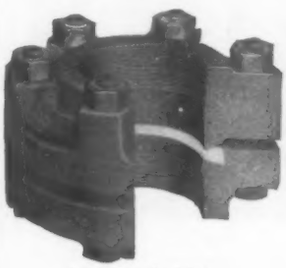

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NEW MEXICO

CHAVES—Buffalo Roswell 1, 24-11-27, sd 4270 ft. McQuigg Bros., Neis 1, 7-5s-29e, dr 3100 ft. Berendo O. & G. Co., Roswell 1. 5-10-27, sd 725 ft. Manhattan Oil Corp., Arena 1, 18-13-31e, contract completed to 3825 ft. Snowden & McSweeney, Merchant 1, nw 27-15s-23e, spud 55 ft. R. E. Neal et al, Russell 1, 21-14s-25e, dr 1000 ft. Warman et al 1, sw 23-13s-24e, lcn.

DE BACA—Matador Oil Co., State 1, sw 6-4n-20e, dr 460 ft. Navajo Oil Co., McAdoo 1, ne 16-1s-27e, dr 3460 ft.

GUADALUPE—Hanchett Oil Co., Rutherford 1, 24-8-24, sd 4355 ft.

LEA—Midwest Ref. Co., State 1, 9-19s-39e, 2000 ft oil standing at 4065 ft; Farnsworth 19. 12-26-37w, spud. Marland Oil Co., Eaves 1, 19-26-37, try to mud gas; Sholes 1, 19-25s-37e, dr 2660 ft. Empire G & F. Co., State 1, 8-21s-35e, dr 1900 ft. Gypsy Oil Co., State 1, 34-21s-36e, dr 1905 ft. Exploration Co., Record 1, ne 26-19s-35e, dr 4300 ft.

McKINLEY—Smart & Reid, 7-17-9, rig. Inland Oil Corp., 22-18-10, installing heavier rig. S. Dysart 1, 21-14-9, sd 1700 ft. Williams et al, 20-18-8w, sd 1795 ft.

QUAY—Gibson Oil Corp., 1, 25-8-32, prep. to deepen.

SAN JUAN—Continental Oil Co., Munoz 17, dr 5730 ft. T. C. N. Oil Co., Lanier 1, 9-29-11, sd 547 ft. Huntington Park Oil Co., 29-30-9, waiting smaller tools, td 4585 ft. Huerfano Oil Co., Wiltbank 1, 25-29-11, stndg 800 ft. San Juan Pet. Co., 1, 9-29-13w, sd 2950 ft. Poole & Peebles Lawson 1, 9-30n-11w, sd 770 ft. Co-Ne-Mo 1, 28-29-11, td 625 ft. Kirtland Dr. Co., Hunt 1, 10-29-15, dr 260 ft. Kutz Canon Oil & aGs Co., Day 1, 29-28-10w, sd 270 ft. Fidelity Oil Co., James 1, nw 23-29-11w, sd 225 ft. Hall et al, nw 31-22n-13w, dr 605 ft. Midwest Ref. Co., State 1, se 36-22n-14w, moving in.

SAN MIGUEL—E. Adams et al, Deason 1, 14-15n-16e, sd 1235 ft.

SOCORRO—Abo Oil Co., 1A, 14-3s-6e, set 12-inch at 600 ft and sd.

TORRANCE—Duran Dome Oil Co., 1, 31-2-14, sd 1600 ft. Bluhall O. & &G. Co., 20-6n-10e, dr 1065 ft. Hall et al, Pinos Wells 1, sw 25-3n-13e, dr 310 ft.

VALENCIA—Acme Oil Co., N. M.-Ariz. Land Co., 26-6-3, dr 2710 ft.

COLORADO

ARCHULETA — Kansas-Colorado Oil Co., 17-34-2w, sd 1820 ft.

BACA—Marland Oil Co., Table Mesa 1, 8-30s-50w, dr 2080 ft.

EL PASO—Grand Union Oil Co., No. 2, John Jr., 19-17s-67w, sd 775 ft.

ELBERT—Botts, Likkick et al, se 1-8s-59, dr 1800 ft.

JACKSON—North Park Oil Co., Goettler 1, 9-6n-82w, standing 506 ft. Producers & Refiners Fuller 1, ne 2-6n-81w, preparing to spud.

JEFFERSON—Wood et al 1, 30-3s-69, dr 1615 ft.

LAS ANIMAS—Reiter-Foster & Phillips Pete, 23-29n-56, dr 2075 ft.

LA PLATA—Detroit Oil Ass'n, Olbert 1, 9-35-12w, sd 1610 ft. Royal P. & R. Co., Red Mesa 1, ne 27-33n-12w, rig.

LOGAN—Northeastern Colorado Oil Co., State 1, 36-8n-55w, sd 5601 ft.

MESA—Eureka Oil Co., No. 2 Holly, 24-1s, 1e, dr 925 ft.

MORGAN—Badger Creek Oil & Gas Co., Kent 1, sw 2-2n-57w, dr 110 ft.

MOFFAT—Reiter-Foster, State 1, 16-12-100, sd 2240 ft. Yarg Producing & Refining Co., 205, 26-4n-92w, dr 3847 ft. Alliance Oil Co., Milliken 1, 14-4n-92w, sidetr bit at 3172 ft.

RIO BLANCO—Texas Prod. Co., Freeman 1, 27-3-94, dr 5600 ft. Argo Oil Co., se 9-2s-96w, stndg ready to spud.

ROUTT—Great Western Oil Co., State 1, 17-60n-56w, standing 2504 ft.

WELD—Platte Valley Pete Corp., Patterson 1, 24-6n-61w, stndg 3811 ft.

YUMA—Etmyre Synd., se sw 7-2s-43, dr 900 ft.

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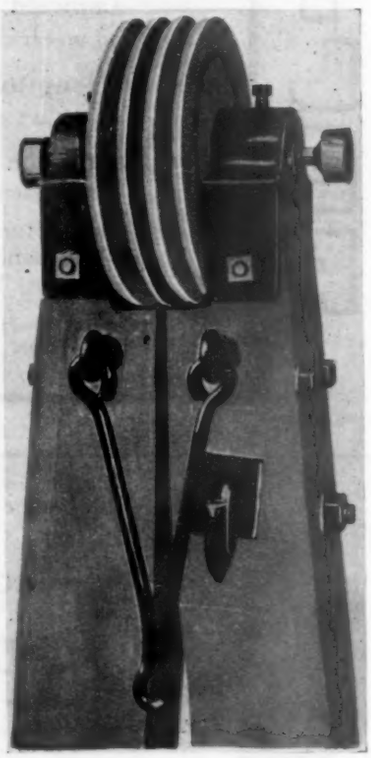

The price to remain the same. Safety $375.00. Eclipse $350.00. F. O. B. Factory.

Either the complete Machine or the Stripped Derrick equipped as above.

For complete description write

SAFETY PULLING MACHINE COMPANY
INDEPENDENCE, KANSAS
P. O. BOX 525

HERE IS YOUR FACTOR OF SAFETY

The Penberthy Automatic Injector removes every vestige of uncertainty, delay or trouble from your boiler feed water supply. There is a Penberthy Injector suited to your specific requirement. Penberthy Products for oil field power units are carried in stock by leading supply houses.

PENBERTHY INJECTOR COMPANY

ESTABLISHED IN 1886 — **DETROIT** — CANADIAN PLANT WINDSOR, ONT.

OIL

Its Conservation and Waste

By
JAMES H. WESTCOTT

This is a new book on petroleum written especially for the layman. The style of the book is such that it will appeal to the man not familiar with petroleum or the methods of recovering it. It gives a birds-eye view of the industry in its three phases.

Much data in the form of figures supplements the subject matter. These figures cover production, refining, etc., and constitute a good source for general information. There are 62 tables covering a wide range of topics related to the industry.

213 pages—$3.00 Postpaid.

The GULF PUBLISHING COMPANY
P. O. Box 1307 Houston, Texas

All gages must pass through this department for final inspection before shipment.

INSPECTION *that earned API Confidence*

These men are the most critical inspectors in the world. They are precision experts. They deal in tiny, unseen fractions of an inch—quantities that the untrained mind cannot comprehend. These master craftsmen check every Pratt & Whitney gage. There can be no fault or flaw or blemish that might permit a gage to pass an imperfect piece of work later on.

The A P I gages made by Pratt & Whitney are models of gage perfection—passed and endorsed by the Institute. Their function is to safeguard the oil industry against poorly fitting parts. If you check your products and equipment against Pratt & Whitney gages *beforehand* there will not be expensive trouble later on in the field.

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Grand Master Cable Drilling Tool Joint Gage.

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REPUTATION

of our product is well known, and to live up to that reputation we can only afford to make the best. Building, with this in mind has enabled us to place our product in all parts of the world.

We invite your closest investigation in construction, operation and ability of our product to perform under all conditions.

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Field Gas Testing. Analysis of oil field brines, gas minerals and oil. Sell Thermometers, Hydrometers and Laboratory Glassware

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MONEY to be made in cheap fee lands; large and small tracts, Southwest Texas, New Mexico. Also leases and royalties and production. Full information, no obligation. Central Texas Land and Developing Co., 1114 Fort Worth Nat'l Bldg., 2-3812.

Book Review

"The Geology of Petroleum and Natural Gas," by Ernest R. Lilley, is a new book which emphasizes and explains geological principles in terms of producing areas. It affords the geologist, production engineer, and petroleum engineer with a scientific reference work on field prospecting, exploration, and study of productive oil areas.

In scope this book covers the composition and characteristics of the petroleums and related bodies, explanations of their origin, and how petroleum geology can be utilized. It shows the influence of geological factors—such as the structure of various rock-masses—on the formation, distribution, and accumulation of petroleum. It gives facts on natural reservoirs or basins with the causes bringing them about; and information on the concentration of oil or gas in deposits. Finally, it contains matter descriptive of oil field exploration, with emphasis placed on the newer procedures of geophysical prospecting.

The method of presentation adopted by the author in preparing this book —that of discussing a fundamental principle of petroleum geology, and driving his point home by illustrating it with a reference to a typical producing locality—makes it a valuable field guide.

Roswell H. Johnson, professor of the department of oil and gas production, the University of Pittsburgh, has made the following favorable comment on Dr. Lilley's work: "The book shows commendable energy in going over the huge and rapidly accumulating literature and seems to have missed relatively little that deserves inclusion."

Copies of the book may be secured from The Gulf Publishing Company, P. O. Box 1307, Houston, Texas. Price $6.00.

Bulletin Notice

The Petroleum Section of the National Safety Council, 108 East Ohio Street, Chicago, announces Safe Practices Pamphlet, Petroleum No. 1, called "Safe Practices in Pulling Wells."

The pamphlet is a compilation of experience in accident prevention and should be in the hands of every safety director in the industry, lease foreman, farm boss and field superintendent.

Many illustrations supplement the descriptive and subject matter and there is also a summary of safe practices in pulling wells.

Copies may be obtained by writing the petroleum section of the National Safety Council.

HEYDRICK'S NEW MAPS
WEST TEXAS

County Maps
Combination Maps

Descriptions and prices on application.

HEYDRICK MAPPING COMPANY
Wichita Falls, Texas.

C. W. WEBSTER

West Texas Oil and Gas Leases
⅞ *Mineral Deeds*
ROYALTIES

15 Years in Texas
Reference: Mercantile Agencies

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PHILLIP MAVERICK
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ADVISOR ON GEOPHYSICAL INSTRUMENTS
619 Petroleum Bldg., Houston, Texas

A plain statement of facts

MORE than twenty years ago the first commercial oxygen for welding and cutting was produced—Linde Oxygen.

From that day on, Linde has been the standard with which all others are compared.

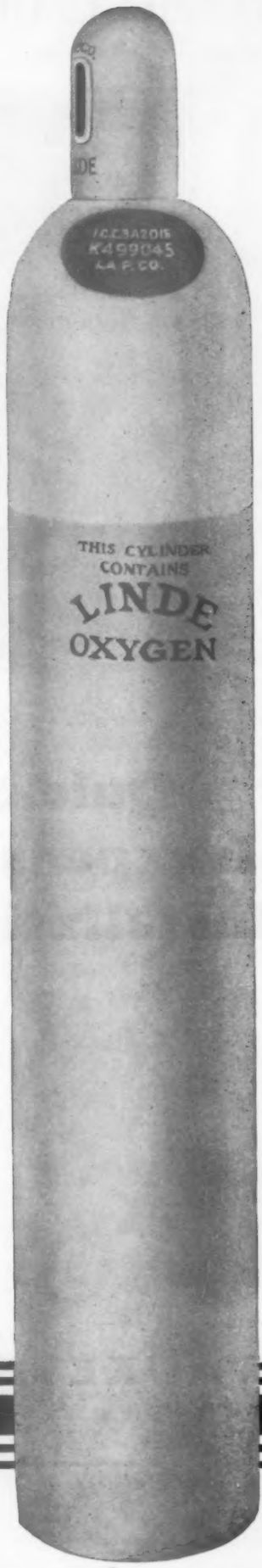
It has always had by far the largest sale of any oxygen.

There are three reasons for this:

—uniform high quality

—immediate delivery

—Linde Process Service—that insures the most economical results for Linde customers.



THE LINDE AIR PRODUCTS CO.
Unit of Union Carbide and Carbon Corporation
49 PLANTS UCC 102 WAREHOUSES
General Offices: Carbide and Carbon Building
30 East 42d Street, New York

LINDE OXYGEN

p-816-L

Typical Waukesha-Powered Oil Flowing Plant Located at Pearson, Oklahoma

Quick Inexpensive Installations

Production men don't overlook this advantage inherent in all Waukesha Oil Field Power Plants. The plant shown above clearly illustrates this. But more important, these simple, inexpensive foundations are practically the only loss when the power plant is moved to another location.

Since wells, requiring a battery of engines when new, may only require one or two when older, these features of portability, compactness and completeness of unit—and minimum set up cost, are very important. They are incorporated in both the Stationary Power Units and the weather-proofed completely housed Oil Field Power Units. This equipment is built in several sizes up to 125 H. P. Write for Oil Field Bulletin, No. 629, describing them.

P-824-L

OIL INDUSTRY EQUIPMENT DIVISION

WAUKESHA MOTOR COMPANY

Waukesha Wisconsin

New York	Tulsa	Houston	San Francisco
8 W. 40th St.	C. F. Camp Co.	Portable Rig Co.	C. A. Watts

Exclusive Builders of Heavy Duty Gasoline Engines for Over Twenty Years

NEW EQUIPMENT, CATALOGS, BULLETINS, BOOKS

Hercules Gas Burner

HERCULES MANUFACTURING COMPANY

The Hercules Manufacturing Company, Fort Worth, Texas, is manufacturing an industrial gas burner which is said to introduce a new principle in the burning of gas, which feature consists of the introduction of a secondary charge of air.

The secondary charge of air is preheated and as it passes through the burning gases the oxygen is consumed.

The burner operates efficiently under either low or high pressure boilers and owing to its construction will operate with any pressure of gas. Tests have shown the burner to be effective on pressures ranging from four ounces to 20 pounds.

In West Texas where the load is very variable, operators are using the burner and state that savings of from 30 to 40 per cent. in gas consumption have been realized.

Further information may be obtained from The Hercules Manufacturing Company, 1106 Hemphill Street, Fort Worth, Texas.

Hercules Gas Burner

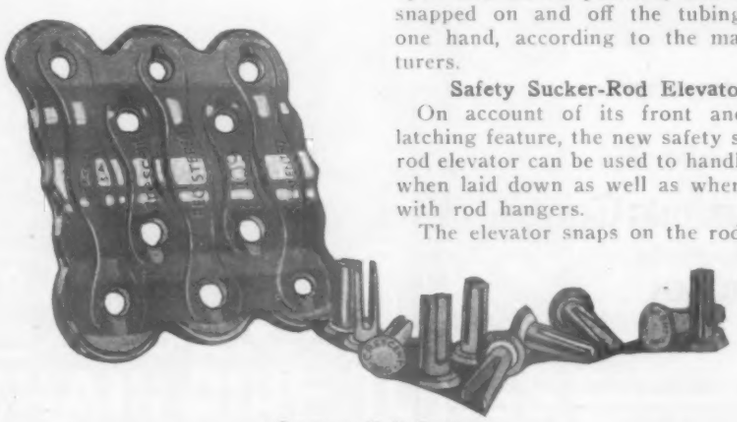
Crescent Belt Fastener

CRESCENT BELT FASTENER COMPANY

Crescent Belt Fastener Company, 247 Park Avenue, New York City, New York, announces a special package for the oil fields. The package is intended for either pumping or drilling belts. There are sufficient Crescent plates and Crescent rivets in each package to join any of the common widths and thicknesses of belting used for this purpose. Extra rivets are included for use when the belt needs to be shortened.

The package is marked to show the particular size and thickness of belting for which it is intended.

Further particulars may be secured from the company.



Crescent Belt Fastener

New Dunn Products

DUNN MANUFACTURING COMPANY

Dunn Manufacturing Company, Oxnard, California, announces three new products applicable to oil production. These include an improved tool brace, the Safety "Snapon" tubing tong, and a new Safety Sucker-rod elevator.

Tool Brace

The improved tool brace was designed for cable-tool operators. It affords a firm brace for the tools in breaking joints and is quickly adjustable over a wide range. In addition to bracing the tools, the device is said to prevent the floor circle from shifting its position on the derrick floor. Adjustments to various lengths is fast. Once set, the brace is firmly locked in position.

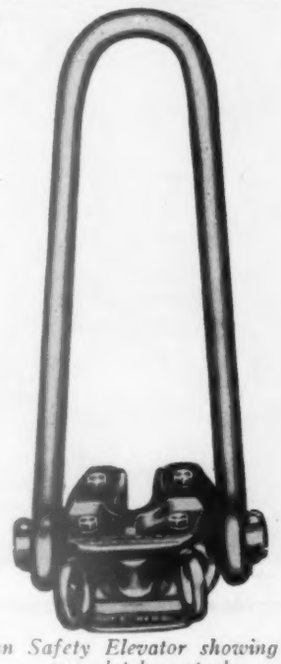
Tubing Tong

The Safety "Snapon" tubing tong is recommended for its speed in operation. It automatically locks in both open and closed position, and can be snapped on and off the tubing with one hand, according to the manufacturers.

Safety Sucker-Rod Elevator

On account of its front and rear latching feature, the new safety sucker-rod elevator can be used to handle rods when laid down as well as when hung with rod hangers.

The elevator snaps on the rod automatically. Two latches are provided, either of which positively prevents accidental disengagement from the rod. The elevator is reversible. It is made



Dunn Safety Elevator showing the rear latch control

of one-piece body and has extra large trunnions. The four one-half inch bolts which hold the two plates to the body act as bearings for the latches. Plates are furnished to fit all sizes and styles of rods and various sizes fit on the same body.

Further information on all the products may be secured from the company.

BUY OR RENT USED PIPE

and Save the Difference

We have the following pipe in the Panhandle District that was purchased new and used in one well:

3600′ 6⅝″ 24-lb. seamless casing.
200′ 20″ 90-lb. casing.
500′ 15⅓″ 70-lb. casing.
1200′ 12½″ 50-lb. casing.
2000′ 10″ 45-lb. casing.
2800′ 8¼″ 32-lb. casing.

Will rent this casing or any other pipe which you may need. Let us finance your operations by carrying your pipe and casing investment for you.

BRANCH STORES
Wichita Falls, Holliday, Vernon, Breckenridge, Texas

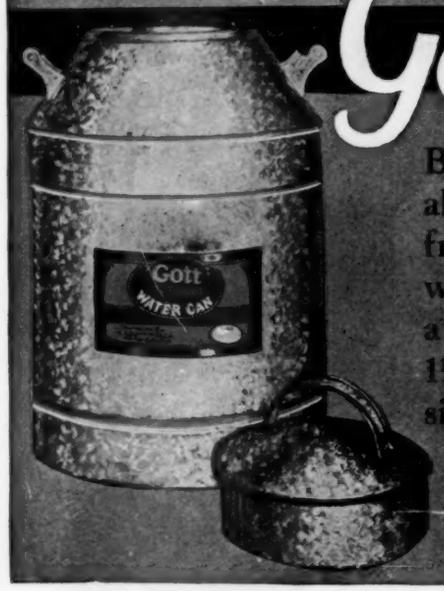
EASTERN HEADQUARTERS
Butler, Penna.

Keystone Pipe & Supply Co.

HOLMES BUILDING
FORT WORTH, TEXAS

Gott Water Can

Gottkool



Built to last—you will always be assured of a fresh supply of pure water, when you have a GOTT. Made in 1½, 3, 5 and 10 gallon sizes. Order now from your supply store.

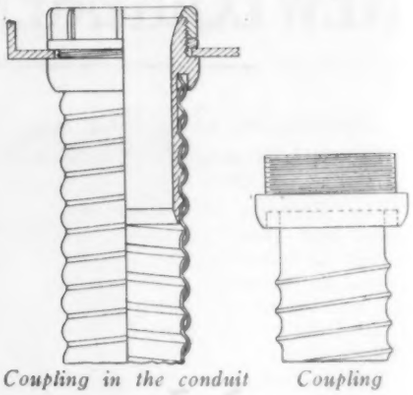
H. P. GOTT MFG. CO.
Winfield, Kansas

NATIONAL PETROLEUM ENGINEERING COMPANY
Engineers & Geologists
TULSA, OKLAHOMA

APPRAISALS
REPORTS-COMMERCIAL & TAX

SURVEYS
ESTIMATES OF OIL RESERVES

AN EXPERIENCED OIL FIELD ORGANIZATION



Coupling in the conduit *Coupling*

"Jake" Flexible Conduit Connection

HUNTER-WALKER COMPANY

Hunter-Walker Company, 809-813 Public National Bank Building, Houston, announces the "Jake" flexible conduit connection. This connection fits in between the wire and the sharp edge of the conduit. It is said that the weight of the conduit and vibration from the motor will not cause the connection to work loose. A rigid connection is made since the connection enters the inside threaded walls of the conduit, the outer edge of the conduit being concealed in the groove of the coupling. This also makes an oil-tight and vapor-proof connection as it seals the end of the conduit. It can be used to connect with rigid conduit as it will screw inside of a pipe collar with standard pipe threads.

Catalog Notice

Landis Machine Company, Waynesboro, Pennsylvania, has just published a new catalog which will be of interest to managers and operators of oil field machine shops.

The catalog carries tables concerning Briggs Standard and Whitworth Standard pipe thread specifications and a table of cutting speeds for the various diameters of pipe from one inch to 20 inches inclusive.

Copies of the catalog may be had by asking for No. 31.

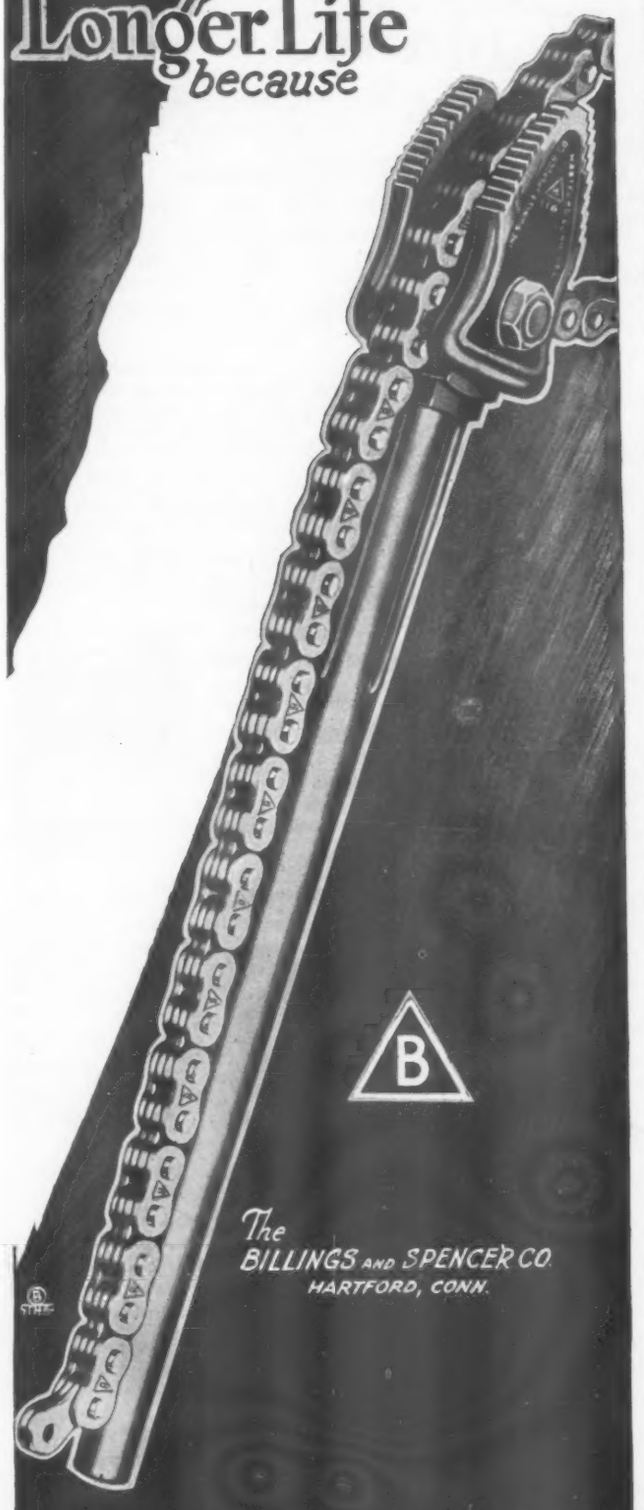
Lucey Houston Sales

The Lucey Products Corporation with headquarters in Tulsa, Oklahoma, has opened a Southern District Sales Office with warehouse in Houston, at 1614 Moffit Street.

R. S. Levering is sales manager of the southern district and Kirby Smith, formerly connected with Houston Pump & Supply Company, is now associated with the sales force in the southern district. A full line of Lucey products will be carried in the Houston warehouse.

Announcement of the opening of a warehouse at Shreveport has also been made. G. L. Blaxton, formerly with the Oil Well Supply Company, is in charge of sales in the Shreveport territory.

Better Service
Longer Life
because



The
BILLINGS AND SPENCER CO.
HARTFORD, CONN.

BILLINGS
CHAIN PIPE TONGS

BARSCO PRODUCTS

—for Oil and Gas Well Drilling

—here's a stronger and more rigid Gas Packing Clamp—

Here's another proof that BARSCO products are built better—*two extra strong bolts* (instead of the usual one) *at either end*—greater rigidity, therefore longer life.

Specifications on Gas Packing Clamps with Gas Outlet

Size, Inches	Size Gas Outlet	Weight, Pounds
6¼ x 4½	1½ or 2	120
6⅝ x 4½	1½ or 2	130
6⅝ x 5-3/16	1½ or 2	120
7⅝ x 5⅝	1½ or 2	150
8¼ x 5-3/16	1½ or 2	160
8¼ x 5-3/16	2½ or 3	155
8¼ x 6¼	1½ or 2	160
8¼ x 6¼	2½ or 3	180
8¼ x 6⅝	1½ or 2	155
8¼ x 6⅝	2½ or 3	190
9⅝ x 7⅝	1½ or 2	195
9⅝ x 7⅝	2½ or 3	240
10 x 6⅝	1½ or 2	230
10 x 6⅝	2½ or 3	290
10 x 8¼	1½ or 2	200
10 x 8¼	2½ or 3	250
11⅝ x 9⅝	1½ or 2	245
11⅝ x 9⅝	2½ or 3	320
12½ x 8¼	1½ or 2	310
12½ x 8¼	2½ or 3	390
12½ x 10	1½ or 2	250
12½ x 10	2½ or 3	330
13½ x 12½	1½ or 2	300
13½ x 12½	2½ or 3	380
15½ x 12½	1½ or 2	370
15½ x 12½	2½ or 3	465
15½ x 13½	1½ or 2	350
15½ x 13½	2½ or 3	440

BARSCO also builds Gas Packing Clamps—regular pattern, without gas outlets.

Bartlesville Supply Company of Missouri
3400 MAURY AVENUE—ST. LOUIS, MISSOURI
Export Office: 150 Broadway, New York City
Oklahoma Warehouse:
Tulsa—J. H. Kountz, 218 East Brady St.
Texas Warehouse:
Amarillo—J. G. Lockard—504 Western Ave.
Stock Carried by Dealers

Write for Complete Catalog

Let's get down to *figures* on this safety business....

The degree of safety attained in any oil country tubular product is largely a matter of strength. We submit the following figures, the results of carefully conducted tests made by competent engineers on run-of-the-mill samples of "Astco" Seamless Steel Pipe:

The Siemens-Martin high-carbon steel of which "Astco" Seamless tubular products are made has a tensile strength of 85,000 pounds per square inch, with 20% elongation in two inches.

In testing for collapsing strength, three samples of "Astco" Seamless steel casing withstood 2450, 2575, and 2535 pounds pressure per square inch respectively.

The slip-joint for welding provided with "Astco" Seamless Steel Slip-Joint Line Pipe shows corresponding strength when welded. Pulling loads necessary to break the weld varied from 75,300 to 322,000 pounds according to the size of pipe.

This extraordinarily high strength means a much higher factor of safety—protection for your investment in time, materials and labor. We have many more interesting records of tests conducted on "Astco" seamless tubular goods. We invite you to write for literature!

American Seamless Tube Corporation

1211 Neils Esperson Bldg.
Houston, Texas

535 Fifth Ave.
New York City

Petroleum Securities Bldg.,
Los Angeles, Calif.

Trade Mark Reg.

Astco

SEAMLESS OIL COUNTRY TUBULAR GOODS

STRENGTH RESISTANCE ASTCO DURABILITY

SQUEAKS FROM THE BULL WHEEL

My motto is: What is worth doing is worth doing well.

I notice that whenever you make a fool of yourself.

"Father, what makes the world go 'round?"

"Son, I've told you many times to keep out of the basement."

The Golfer — They're all afraid to play me. What do you think my handicap is?

The Girl—Oh, I don't know. It may be your face.

"Marry my daughter? Why dammit, young man, you couldn't even keep her in clothing."

"But, sir, am I to blame for this modern spirit?"

They were looking into the depths of the Grand Canyon. "Do you know," asked the guide, "that it took millions of years for this great abyss to be carved out?" "Well, well!" commented the traveler, "I never knew this was a government job."

In Arizona

Conductor why is this train late?

Well, you see, sir, at night it gets so cold that the fireman can't keep up steam in the engine, and in the daytime it gets so hot that the rails expand and push the towns farther apart

---

An Englishman at an American bar in Paris ordered from the list of drinks a cocktail called the "Stars and Stripes."

When served, he saw that it was composed of liqueurs of different densities, the whole producing a striped effect.

"That's all right for the stripes," said the Briton, "but what about the stars?"

"Drink the cocktail," replied the bartender, "and you'll see them."

The car had broken down, and the pair of legs protruding from underneath seemed to indicate that repairs were in progress.

"Had a breakdown?" inquired a passerby.

"Oh no, only playing hide-and-seek with the works," came a muffled voice from underneath the car. But the questioner was not easily daunted.

"What power car is it?"

"Forty horse."

"What's wrong with it?"

"Well, as far as I know," came the answer, "thirty-nine horses have bolted, and the remaining one is too upset to answer questions."

"Mary, is that young man there yet?"

"No, father, but he's getting there."

"Say, boy, are you drunk?"

"If I'm not I've been cheated out of ten bucks."

What is an angle worm?

An angle worm is a caterpillar that played strip poker and lost.

Eli—There is a mountain here, isn't there?

Native—Yes, but you must have a guide if you want to climb it.

Eli—Is it that hard and dangerous?

Native—No, but it's so hard to find.

The stout lady on the scale was eagerly watched by two small boys.

The lady dropped in her cent, but the machine was out of order and only registered 75 pounds.

"Good night, Bill," gasped one of the youngsters in amazement, "She's hollow!"

Mayme Smith headed a church committee the other day to call on a family that was in distress. The wife and mother were at home when the good samaritans arrived. The wife told a heart rending story of poverty and privation. "What would help you most?" Mayme asked, sobbing. "Well, replied the starving woman, "if you could let us have the money to get our car fixed up so it would run once more, I feel like we might make it somehow."

A famous actor who was often accustomed to show a great interest in the lesser lights about him, was good-naturedly conversing with one of the stage-hands. "And what, my man, is your vocation?" queried the condescending matinee idol.

"I'm a Baptist," was the reply.

"No, no, good fellow, that is your belief. I want to know your vocation. For example, I am an actor."

Said the scene-shifter: "Hell, man, that's your belief."

It was the first case, and he was bubbling over with pride and enthusiasm as he stood in court.

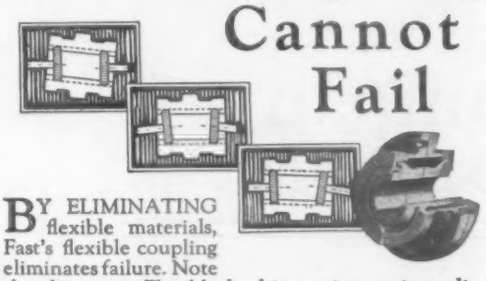
"Now," said the young lawyer, addressing the defendant, "you say you came from New York to Los Angeles merely to look for work? I put it to you there was another, a stronger, motive that brought you all this distance."

"Well," hesitated the defendant, "there was—"

"Ah!" cried the barrister, triumphanty. And what was it?"

"A locomotive."

This Coupling Cannot Fail



BY ELIMINATING flexible materials, Fast's flexible coupling eliminates failure. Note the diagram. Flexible bushings, pins, springs, discs and grids are eliminated, and instead a simple mechanical principle is used.

Two spur gears, one on each shaft end, are completely and continuously meshed in oil, with the internal gears of a floating sleeve. The shafts and sleeve turn noiselessly as one unit, allowing free angular and lateral movement.

Replacements become a thing of the past, because the coupling will last as long as the connected machines. Nothing to break. Nothing to replace. There is no power loss, and the oil between the gear teeth, under centrifugal pressure, carries the load.

FAST'S COUPLING
—Self-Aligning—

THE BARTLETT HAYWARD CO.
200 Scott Street - BALTIMORE, MD.

Write today for free BOOK

Thoroughness

To stick to a job through thick and thin; to hold in mind at every step the ideal of the ultimate goal; to climb with unfaltering courage over every obstacle . . these are the attributes of a Man. But they may all be summed up in one pregnant word. *Thoroughness.* And that word expresses the most characteristic quality of the manufacture of every Wickwire product.

WICKWIRE SPENCER STEEL CO.
39 East 42nd St., New York, N. Y.

Or

Branch Office
1310 Philtower Bldg.,
Tulsa, Okla.

Stocks carried by
Murray Tool & Supply Co.
Tulsa, Okla.

T. T. Word Supply Co.
Houston, Texas

A. F. Keck & Co.
Butler, Pa.

WICKWIRE SPENCER STEEL CO.

V. E. BAUM, *Petroleum Engineer*
MURRAY TOOL & SUPPLY CO.
222 East Brady Street, Tulsa, Okla.

With out

exception

every order *has* brought *repeat orders!*

What is your idea of the most convincing proof a manufacturer can offer on behalf of his product?

Isn't it *repeat orders?*

Good salesmanship can sell a product once—but only genuine value can sell it a second time.

With this thought in mind consider the unique record of the NO-CO-RO Drop & Seat: hundreds sold on a liberal guarantee basis—*not one returned;* thousands sold in all—and every customer so satisfied as to buy again!

The reasons? A sound advance in valve check design that gives from *three* to *thirty-six* times greater service; a material, developed through twenty-two years of intimate oil industry association, that simply will not chip, pit or corrode; a manufacturing and inspection system that assures not only a perfect product but perfect mating of the parts that make up the product; a guarantee that specifically promises twice the service of the best ball and seat or money back.

Whether under these circumstances you can afford not to give the Drop & Seat a trial, is a question we leave to you.

NORRIS BROTHERS, Inc.

ROBINSON, ILLINOIS FORT WORTH, TEXAS

Gulf Refining Company

OKLAHOMA
TEXAS
LOUISIANA

Refiners of PETROLEUM

GASOLINE
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Red and Pale Paraffine Oils

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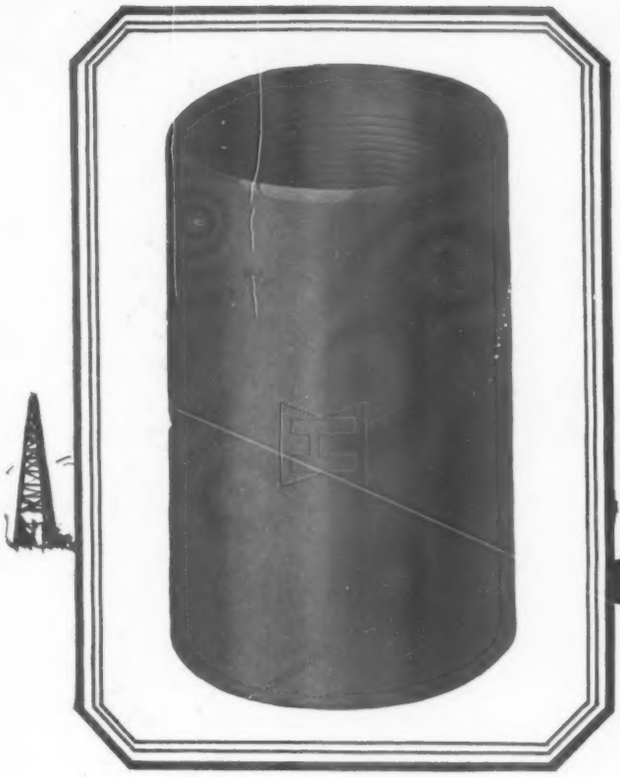

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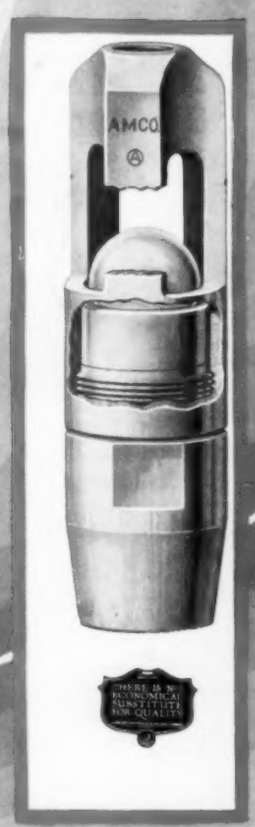

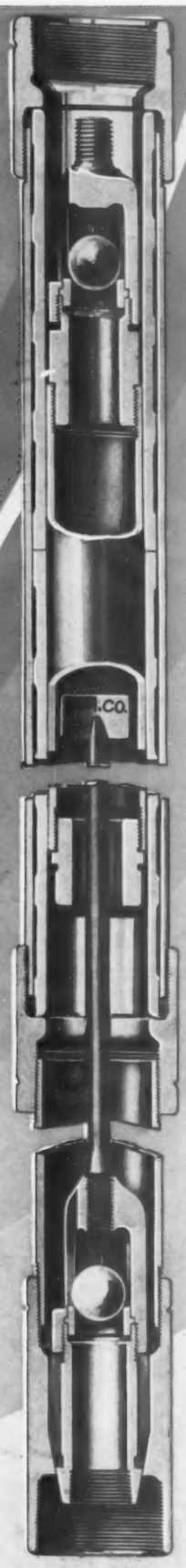

The Pump illustrated is the Axelson "Top Collar Both Ends" Pump with regular working valve assembly. The Super-Size Valve, illustrated to the left, can be inserted without the use of extra fittings.

Axelson Super Size *Standing Valve*

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